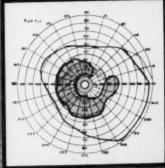
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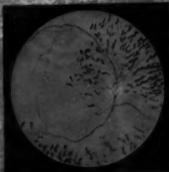
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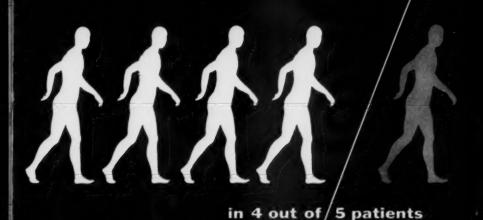
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 Dailheu-Geoffroy, P.: L'Ouest-Médical, vol. 3 (July) 1950.
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Address all correspondence to 84 South 10th Street, Minneapolis 3, Minn.

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Walter C. Alvarez
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THE MAN ON THE COVER is Dr. P. J. Leinfelder of Iowa City, Professor of Ophthalmology at the University of Iowa and assistant chief of the eye clinic at the University of Iowa Hospitals. Since 1946, Dr. Leinfelder has been a member of the faculty of the Ophthalmological Study Council. He has done a great amount of research in neuro-ophthalmology and retinal and nervous system physiology, and in 1940 he received the Merit Prize in Research from the Association for Research Ophthalmology. Dr. Leinfelder is a member of the American Academy of Ophthalmology and the Pan-American Association of Ophthalmology and the Pan-American Association of Ophthalmologyists. A special article by Dr. Leinfelder, "The Role of Visual Fields in Diagnosis," appears on page 72.



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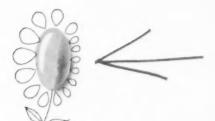
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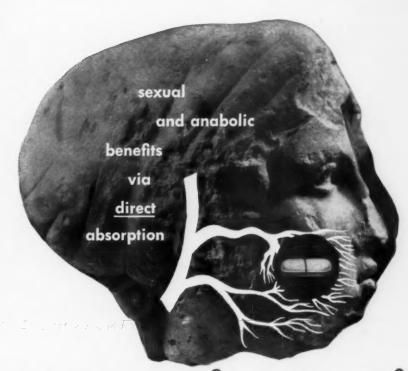
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Flippin, H. F., and Eisenberg, G. M.: Antimicrobial Therapy in Medical Practice, Philadelphia, F. A. Davis Co., 1955, p. 40.



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Trafton, H. M., et al.: New England J. Med. 252: 383, 1955.



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Beutner, E. H., et al.: Antibiotics Annual, 1954-1955, New York Medical Encyclopedia, Inc., 1955, p. 988.



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Hasen, H. B., and Moore, T. D.: J.A.M.A. **155**: 1470, 1954.



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*Ataractic, from ataraxia: calmness untroubled by mental or emotional excitation. (Use of term suggested by Dr. Howard Fabing at a recent meeting of the American Psychiatric Association.)

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LETTER FROM THE EDITORS

Dear Reader:

More than 5,000 medical publications are reviewed by the editors and editorial board members of *Modern Medicine* each year so that the 130,000 physicians receiving *Modern Medicine* may have up-to-date reports on what is happening in the world of medicine. The genuinely new, important, and practical are winnowed from the rest and brought to you every fortnight.

In this selective reporting process, the selections are made by a group of men which includes top-ranking specialists and educators, many of them leaders in our great medical universities. They are busy men, full-time physicians who, in spite of the demands on their time, regularly devote hours to *Modern Medicine* as part-time editors to insure that their fellow physicians will get a complete and accurate synopsis of today's important medical developments.

The story of these men and how they select the material and of how the material is boiled down, edited, checked, and rechecked is told by our Editor-in-Chief, Dr. Walter C. Alvarez in a booklet, "You Are Invited to Witness Modern

Medicine in the Making."

It is a wonderful story simply told in Dr. Alvarez' own words and in his friendly informal style. It will give you a new appreciation of the care exercised to see that the reports brought to you are accurate to the letter and in the spirit of the original article. You may be amazed at the number of people who have a hand in processing the abstracts. The procedure may sound involved, but each step has been found necessary and important to maintain the editorial standards that have won recognition for *Modern Medicine* as a reliable source of medical information.

The booklet was sent out last summer to all the physicians then receiving *Modern Medicine*. If you did not get your copy or have mislaid it, let us know and we will see that another is sent to you.

The Editors

to reduce

- (1) inflammation
 - (2) edema and
 - (3) infection

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Correspondence

Communications from the readers of Modern Medicine are always welcome. Address communications to The Editors, Modern Medicine, 84 South 10th St., Minneapolis 3, Minn.

No Doubts

TO THE EDITORS: Many thanks for publishing my letter in the Correspondence section of *Modern Medicine* (Oct. 1, 1955, p. 25). I want to correct an error in the statement "I doubt that Dr. Iason can perform these procedures in the time stated." My letter read: "I am not doubting that Dr. Iason can perform these procedures in the time stated."

ERNEST E. ARNHEIM, M.D. New York City

Pressure Breathing for Edema

TO THE EDITORS: In the article "Pulmonary Edema" by Dr. Graham W. Hayward (Modern Medicine, Sept. 1, 1955, p. 99), no mention was made of pressure breathing, the most effective and practical treatment when left ventricular failure is the cause of pulmonary edema. The closing sentence of the article says, "Treatment is difficult because of the change in lung elasticity." Lung congestion does result in decreased lung elasticity, but cardiac function is promptly restored in many instances by pressure breathing.

Pressure breathing reduces the flow of blood into the right side of

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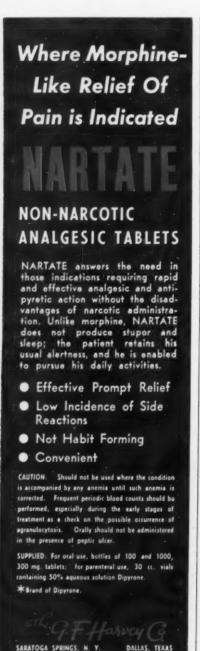
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the heart and thus permits the cardiac muscle to function more easily. Pulmonary edema ordinarily clears after this procedure. I think this should be called to the attention of your readers so that morphine, barbiturates, and the other procedures mentioned in the article would not be the only therapeutic measures employed.

The principles and apparatus employed, as well as the technic of their use, are presented in my book *Physiologic Therapy in Respiratory Diseases*.

ALVAN L. BARACH, M.D. New York City

Inoperable Cancer Just That

TO THE EDITORS: A standing ovation should be given to the physicians who are honest with themselves in facing the results accomplished by surgery for inoperable cancer of the breast.

I agree with the report by Dr. Leo A. Will (Modern Medicine, Aug. 1, 1955, p. 20). Dr. Will states:

If we are honest with ourselves, I feel that any time we see a woman with a nodule in her breast and visible or palpable axillary glands, we will realize that this individual is an inoperable case. It is my belief that if we do nothing, the chances are that the patient will survive as long, if not not longer, than if we operated. I have come to the conclusion that radical cancer surgery can be best likened to pouring gasoline on a fire.

I don't believe that any surgeon could obtain a favorable result, prolong the life of a patient, or prevent metastasis by performing a radical operation, or any operation, for an ulcerated cancer of the

(Continued on page 28)





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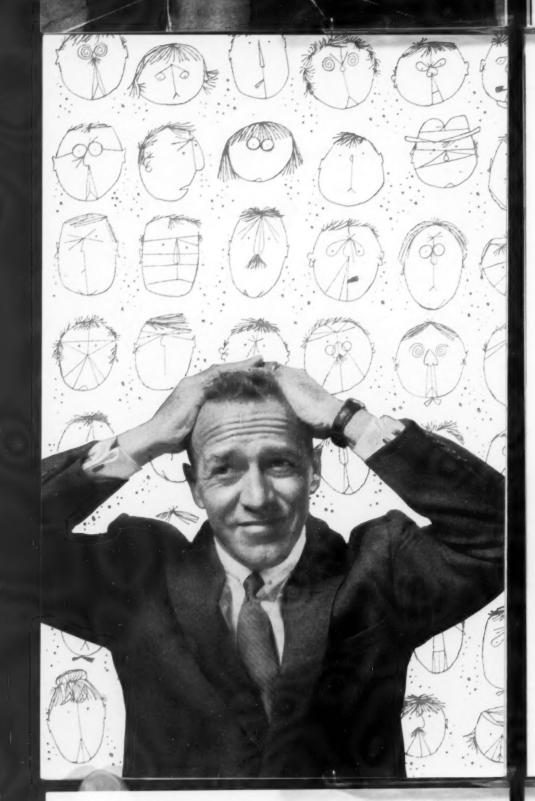
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 Butler T. C.; Mahaffee, C., and Waddell, W. J.; Phenobarbital; Studies of Elimination, Accumulation, Tolerance, and Dosage Schedules, J. Pharmacol. & Exper. Therap. 111.425 (Aug.) 1954.



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CORRESPONDENCE

breast. After postoperative treatment, the patient eventually becomes bedridden and the prognosis is hopeless. Finally, a general practitioner is called in to care for the suffering and dying patient.

JOSEPH H. FELGOISE, M.D. Philadelphia

Fibrin Used in U.S. in 1944

TO THE EDITORS: I have just read the report from Russia on the use of fibrin dressings for burns in your section, Medical Notes from Abroad (Modern Medicine, Aug. 1, 1955, p. 36).

This method of dressings for burns was first used in the United States in 1944 (U.S. Naval M.

Bull. 42:1171-1173, 1944). The plasma sheets or membranes prevent excessive plasma loss when applied to burns. The sheets eliminate the foul odor of burned areas and, frequently, the use of dressings. However, this therapy does not decrease the healing time over the exposure method.

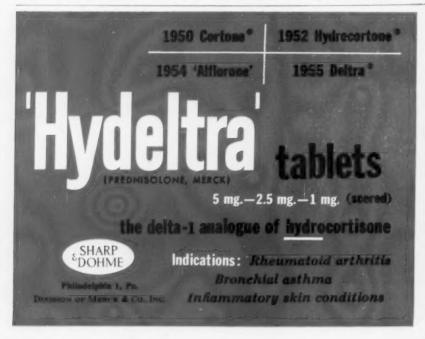
B. G. POLLOCK, M.D.

Miami

Interesting, Valuable Book

TO THE EDITORS: The 1955 Modern Medicine Annual is one of the most interesting and valuable medical books I have ever seen.

I found the article by Dr. Emanuel Schwartz on hydrocortisone for





In weighing the merits of an important piece of equipment, such as an electrocardiograph, it is often helpful to know something about the maker — his qualifications, his experience, and the other acceptable instruments he makes. In short, you might like to know what sort of background the considered electrocardiograph has.

In the case of the Viso-Cardiette, such a background can be represented by the instruments chosen to accompany it in the picture above. Although not possible to show them all here, Sanborn instruments of precision cover the complete range of cardiac recording for diagnosis and research, and also provide

the basis for the measurement and recording of most of the other types of physiological phenomena.

Collectively, they represent the tangible application of the Sanborn experiences and skills that were gained over the past third of a century. Unquestionably, such a background does make the Viso picture complete.



Write for completely descriptive literature, or contact your local Sanborn Office for information or a demonstration.

CORRESPONDENCE

the treatment of hay fever especially valuable (p. 567). I have successfully treated many patients with this preparation during the past year.

B. H. SULLIVAN, M.D.

Miami, Mo.

Surgery Not Only Answer

TO THE EDITORS: In the article on management of bronchiectasis (Modern Medicine, June 1, 1955, p. 101), the statement is made that "removal of the diseased segment is the only definitive treatment for bronchiectasis."

I regret to state that, in spite of the medical lag in integrating contributions of the microbiologists interested in bacterial genetics to clinical practice, evidence with adequate follow-up would seem to question the accuracy of this statement. With our present knowledge of aerosols and multiple chemotherapy using detergent solvents in suppurative diseases of the lung, including pulmonary tuberculosis, such radical surgery may be eliminated.

EDWIN J. GRACE, M.D.

Brooklyn

Intubator Plea Answered

TO THE EDITORS: The little notice (Modern Medicine, July 1, 1955, p. 64) regarding a foreign hospital's need for an O'Dwyer in-





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CORRESPONDENCE

tubator brought much correspondence and a complete apparatus in perfect condition. The set, received from Dr. Reuben Friedman of Philadelphia, is being sent to the needy hospital.

Your journal reached many persons with whom I had lost contact during the last forty years.

HERMAN GOODMAN, M.D. New York City

An Unexplored Field

TO THE EDITORS: I believe that the most unexplored field in medicine is that of the unique experiences of the general practitioner. Therefore, I would like to see a journal devote a section to the critical but not uncharitable analysis of these experiences.

A vast field of investigation would be offered to our institutions, and the researcher, who has limited or no contact with general practice, could examine the unusual cases, a privilege too often reserved to the general practitioner.

R. C. CREELMAN, M.D. Bremerton, Wash.

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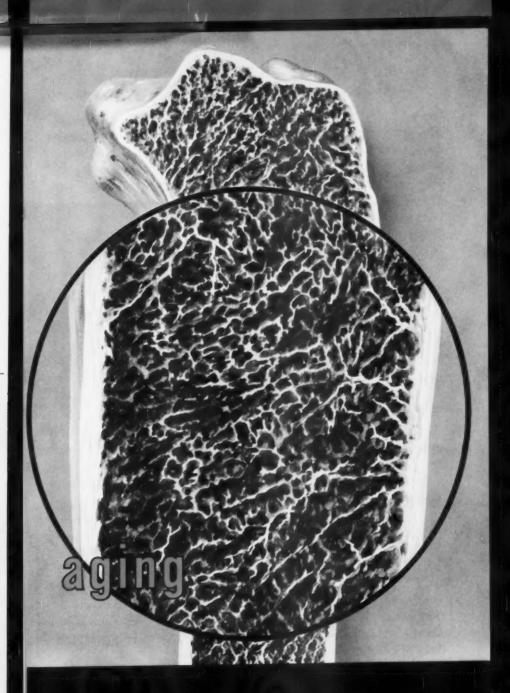
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DOTEGOODDCIC DECRONDS TO COMPINED ESTROCEN.

POSTMENOPAUSAL OSTEOPOROSIS IS PROBABLY THE MOST COMMON OF ALL SYSTEMIC BONE DISORDERS 1

Osteoporosis occurs in both sexes, but is more prevalent in the female.² This is explained on the basis that "gonadal function in old persons is more markedly reduced in females than in males." It is easy, therefore, to understand why the aging process, with its accompanying decline in sex hormone function, is more frequently responsible for osteoporosis.

■ CLINICAL SIGNS PRECEDE X-RAY DETECTION

Clinical manifestations of osteoporosis usually appear long before x-ray evidence of the disease can be obtained. It is virtually impossible to detect with Tibia, magnified sagittal section

- 1. Typical rarefaction of bone matrix due to osteoporosis.
- 2. Normal, fully calcified osseous structure.



accuracy any change in bone density until at least 30 per cent of the normal calcium content is lost.

SIGNS AND SYMPTOMS

- "Low back pain" or dull, tired, aching feeling along the spine
- · Nervousness, weakness, easy fatigability
- · "Rounding" of the shoulders
- Increased susceptibility to fracture, particularly of the hip, in elderly women

Osteoporosis is almost "physiologic" after the menopause, and if all women in this age group "are carefully studied, about 10 per cent of them will be found to have clinical osteoporosis." ³

OSTEOPOROSIS RESPONDS TO COMBINED ESTROGEN-ANDROGEN THERAPY

RATIONALE OF THERAPY

Estrogen stimulates osteoblastic activity and increases calcium and phosphorus retention, while androgen exerts an anabolic or proteinforming action. "Premarin" with Methyltestosterone therapy utilizes the complementary action of estrogen and androgen on bone and pro-

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RESULTS TO BE EXPECTED

Patients receiving estrogen-androgen therapy "can look forward, as a group, to considerable relief from pain . . . a gain in weight, an apparent increase in thickness of the skin and a generally improved sense of well-being." Older women with fractures, particularly of the hip, respond especially well. The prognosis for bone recalcification is good, provided

therapy is continued for extended periods.

SUGGESTED DOSAGES

"Premarin" with Methyltestosterone may be administered in the following dosage schedule: 2 or 3 tablets No. 879 (yellow) daily, or 4 to 6 tablets No. 878 (red) daily.

In the female, it is suggested that combined therapy be given in 21 day courses with a rest period of about one week between courses, and be continued for 6 to 12 months; following this period, the patient may be maintained with cyclic therapy employing "Premarin" Tablets alone.

In the male, a careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

- Albright, F., and Reifenstein, E. C., Jr.: The Parathyroid Glands and Metabolic Bone Disease, Baltimore, The Williams & Wilkins Company, 1948, p. 145.
- MacKenzie, D. A., and Janes, J. M.: Canad. M. A. J. 71:339 (Oct.) 1954; abstracted, Mod. Med. 23:142 (Feb. 1) 1955.
- 3. Reifenstein, E. C., Jr., in Harrison, T. R.: Principles of Internal Medicine, Philadelphia, The Blakiston Company, 1950, p. 655.
- 4. Hart, G. M.: Geriatrics 5:321 (Nov.-Dec.) 1950.

"PREMARIN" with METHYLTESTOSTERONE

Climacteric (female)

(in certain cases)

In the majority of patients, estrogen therapy as provided by "Premarin" alone is the ideal choice for the relief of menopausal distress. However, in certain selected cases, particularly when the menopausal syndrome is complicated by functional uterine bleeding or cyclomastopathy, the combination of estrogen and androgen may provide greater benefit with minimum danger of side effects.

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- Osteoporosis
- Postpartum Breast Engorgement
- Dysmenorrhea
- Climacteric (male) in certain cases
- Malnutrition (in the female)
- As an adjunct to treatment with cortisone in rheumatoid arthritis

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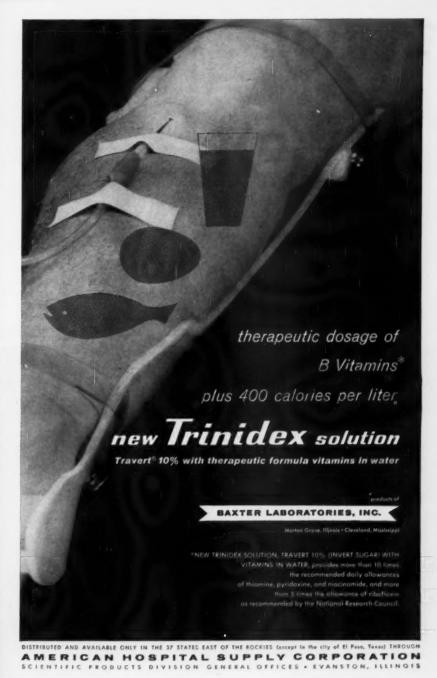
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uestions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, 84 South Tenth Street, Minneapolis 3, Minnesota.

Weight Loss

QUESTION: A 25-year-old man is steadily losing weight without an apparent reason. All clinical and laboratory findings are negative, and the man has no worries. What could be the reason for the weight loss?

M.D., New York

ANSWER: By Consultant in Internal Medicine. Weight loss may be caused by increased energy output, as from exercise and heavy labor,

or may be psychogenic, as with the neuroses, psychoses, and anorexia nervosa. Other factors include increased catabolism with elevation of the basal metabolic rate during fever and leukemia, prolonged infections, and carcinoma. Hyperthyroidism, diabetes mellitus, and Addison's or Simmonds' disease should also be considered in determining the etiology.

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Treatment of Hypotension

QUESTION: For the past fifteen years, a male patient has had weakness and vertigo with blood pressure levels between 90/60 to 110/80. What can be done to build up the blood pressure?

M.D., California

ANSWER: By Consultant in Internal Medicine. Hypotension is not a disease. Symptoms may be due to functional disturbance. Therefore, psychogenic and postural factors should be considered in determining the etiology.

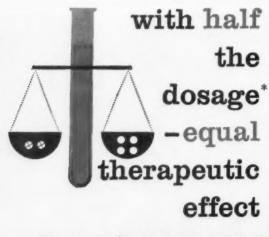
Therapy for the condition is not specific unless Addison's disease is suspected. Beneficial results from other forms of treatment are usually psychogenic rather than pharmacologic.

Staining Blood Smears

QUESTION: What are the methods for staining blood smears for differential count?

M.D., New York

ANSWER: By Consultant in Hematology. Present methods of staining blood smears are probably derived from Ehrlich's technic. His methods were improved by Romanowsky, and the various staining methods in use are often termed Romanowsky stains. Other methods, such as Wright, Giemsa, May-Grünwald, MacNeal, Pappenheim, Rosenthal, and Jenner stains, are modifications of the Romanowsky stain. The most commonly used method is Wright's stain. The Giemsa and May-Grünwald stains are still in use.



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0.25 Gm. per 4-ml. teaspoonful

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SUMMIT, N. J.

*Elkosin maintains effective blood levels, both in urinary and systemic infections, with standard (i.e., sulfadiazine) dosage, or approximately half the dosage required with the other widely used single-soluble sulfonamide. This means extra safety, and greater convenience and economy.

2/214914

'Thorazine' is "an effective agent for blocking the mechanism of nausea and vomiting..."

This conclusion was reached after a study of 'Thorazine' in 336 patients with severe nausea and vomiting from many different causes, including the following:

drugs such as digitalis, aminophylline,
antibiotics and morphine; infectious or
toxic reactions, such as gastroenteritis;
congestive heart failure; peptic ulcer; intestinal obstruction; general anesthesia;
and pregnancy.

Moyer et al.: A.M.A. Arch. Int. Med. 94:497 (Sept.) 1954.

THORAZINE*

'Thorazine' Hydrochloride is available in ampuls, tablets and syrup.

Additional information on 'Thorazine' is available on request.

Smith, Kline & French Laboratories
1530 Spring Garden Street, Philadelphia 1

*T.M. Reg. U.S. Pat. Off. for S.K.F.'s brand of chlorpromazine.



Prevention of Stroke or Heat Exhaustion in the Armed Services

SURGEON COMDR. F. P. ELLIS British Joint Services Mission, Washington, D. C.

Exhaustion or stroke from heat is usually preventible except in extreme military operational circumstances.*

Profuse sweating with consequent dehydration and salt deficiency induces heat exhaustion. Heat stroke is produced by diminution or cessation of sweating, since impairment of evaporative cooling causes the body temperature to rise. Stroke is less common than exhaustion but causes more deaths.

The causes of heat incapacitation—excessive warmth, hard work, unsuitable clothing, and dehydration—can be controlled or avoided. Yet the incidence of the disorder in the United States Army and Marines is considerable, especially among troops in the United States.

For every 100,000 entries on the sick list in 1951 and 1952, 123 army men in the United States and 30 soldiers abroad had heat exhaustion. Corresponding figures for the Marine Corps are 198 and 45 and for the Navy are 17 and 21. Admissions per 100,000 in the United States for heat stroke were 6 in the Army, 1 in the Navy, and 7 in the Marines.

*Prevention of heat incapacitation in the armed forces. Mil. Med. 116:323-329, 1955.

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now available... the second new Schering corticosteroi

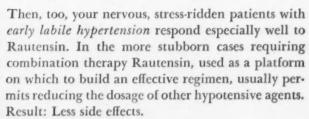
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"possesses an augmented therapeutic ratio"

Over cortisone and hydrocortisone

All hypertensives should receive the same initial therapy

The consensus of research clinicians advocates Rauwolfia alkaloids—such as Rautensin, a standardized extract containing all the hypotensive and tranquillizing Rauwolfia alkaloids, free from inert material—as the first step in all hypotensive therapy. The lack of toxicity over a wide range of dosage, the tranquillizing, headache-relieving, pulse-slowing and gradual hypotensive action of Rautensin make it one of the safest preparations in the initial treatment of all types of hypertension, irrespective of severity.



Each Rautensin tablet contains 2 mg. of purified Rauwolfia alkaloids (alseroxylon fraction).

Dosage: For the first 20 to 30 days 2 tablets (4 mg.) once daily before retiring; thereafter 1 tablet (2 mg.) daily usually suffices.



for basic therapy in all hypertensives

Rautensin is a DORSEY preparation

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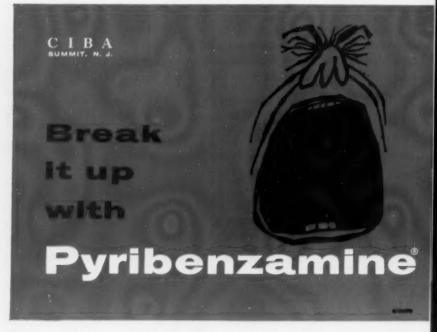




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MILITARY MEDICINE

If the air temperature is higher than the body temperature so that heat moves into rather than out of the body or if the body cannot expend enough heat by convection, radiation, or conduction, the body must resort to cooling by evaporation. Sweating is possible only in unsaturated air with vapor pressure less than the vapor pressure at the surface of the skin.

Brisk air currents accelerate evaporative cooling. Clothing protects against absorption of heat but also impairs evaporation of sweat.

In still, warm air, continuous hard work is impracticable at a wet-bulb temperature over 78° F., and wet-bulb temperatures beyond 88° F. cannot be tolerated by most persons even without exertion.

Many fatalities occur at wet-bulb temperatures in the seventies when heat stress is apt to be underestimated.

The United States Marines advise caution at a wet-bulb temperature of 82° F. with an air temperature of 90° F., or at 75° F. with air at 100° F. Both values are roughly equal to an effective temperature of 84° with an air speed of 50 ft. per minute.

Acclimation and training reduce heat stress. Work should be stepped up gradually and reduced if weather suddenly becomes warm and humid. Since men near the limit of endurance are in a state simulating anoxia and are unable to judge the hazard, officers in charge should (Continued on page 46)

PYRIBENZAMINE CITRATE (30 mg. per 4 ml.)
Relieves Congestion

EPHEDRINE SULPHATE (10 mg. per 4 ml.)
Relaxes Bronchioles

AMMONIUM CHEDRIDE (80 mg. per 4 ml.)
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Alse availables Pyrisenzamine Expectorant with
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codeine phosphate, ser 4 ml.); exampt narcotic.

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Donnatal Extended Action Tablets

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Each Dennatal Extentab contains:

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Each tablet is a complete test tube that may be used anywhere. Franklin Bilirubin Test Kit, complete with 100 tablets, \$6.75.

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NOW! 2new tastetempting dosage forms of Pfizer-discovered tetracycline



New standards for tetracycline therapy in new ready-mixed liquid form...

> **NEW** palatability **NEW** convenience **NEW** versatility

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ABON

Brand of tetracycline

The outstanding modern broad-spectrum antibiotic, tetracycline, in a palate-pleasing, raspberry-flavored homogenized mixture, standardized and ready-mixed at Pfizer Laboratories.

SUPPLIED: Bottles of 2 ounces and 1 pint. Each 5 cc. teaspoonful contains 125 mg. of tetracycline.

Brand of tetracycline hydrochloride with vitamins

A fruit-mint flavored sugar-free homogenized mixture of tetracycline ready-mixed at Pfizer Laboratories and fortified with adequate quantities of B complex and vitamins C and K for nutritional support during stress. TETRABON SF provides therapy on two levels:

- 1. anti-infective, against the pathogen
- 2. metabolic, assisting the patient physiologically.

SUPPLIED: Bottles of 2 ounces. Each 5 cc. teaspoonful contains 125 mg. of tetracycline plus the following formula:

Niacinamide 12.5 mg. Pyridoxine hydrochloride 0.25 mg.

Vitamin C as palmitate 37.5 mg. Calcium pantothenate...2.5 mg. Thiamine hydrochloride 1.25 mg. Folic acid..........0.188 mg. Riboflavin1.25 mg. Menadione (vitamin K analog)0.25 mg. Vitamin B₁₂0.5 mcg.

*Trademark

† Trademark for Pfizer-originated, vitamin-fortified antibiotics



PFIZER LABORATORIES, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

MILITARY MEDICINE

be under less stress than the men. A cool place to sleep improves ability to withstand heat and, by

reducing incidence of prickly heat, guards against disruption of the

sweat mechanism.

Water and salt losses in sweat must be replaced. Water intake to produce 30 oz. of urine a day is recommended. Low water supplies can be conserved by drinking small amounts frequently, resting in the shade and doing little heavy work in the heat of the day to reduce sweating, and by wetting clothes in nonpotable water.

Since salt content of sweat varies. replacement requirements differ and must be learned by experience. Too much salt causes malaise, purging, and skin rashes. Supplements are

not necessary unless men are sweating continuously or repeatedly. Salt can be added at meals, in tablets, or in 0.1% concentration in water.

Young, healthy men recover rapidly from heat incapacitation if water and salt replacements and a cool environment are provided. If treatment is delayed, high body temperature or dehydration may produce irreversible changes, particularly in the central nervous system.

Military medical staffs can provide recommendations but the ultimate responsibility rests with the command. When heat casualties occur in a training camp, the commander should not disregard the hazard but teach the men how to conserve health in warm climates.

"... Calm and easier to get along with"

Wife's comment regarding a 43-year-old rancher suffering from a prolonged mild hypomanic reaction who was placed on 0.75 mg. of oral reserpine (Serpasil) daily for 5 months. She told the investigators that without Serpasil it would be intolerable for her to live with him.

Drake, F. R., and Ebaugh, F. G.: Ann. New York Acad. Sc. 61:198 (April 15) 1955.

Supplied: Tablets, 0.1 mg., 0.25 mg. (scored), 1.0 mg. (scored), 2.0 mg. (scored), 4.0 mg. (scored). Elixir, 0.2 mg. per 4 ml.

PSYCHIATRIC USE ONLY: Elixir, 1.0 mg. per 4 ml.; Parenteral Solution, 2-ml. ampuls, 2.5 mg. per ml.

(reserpine CIBA)

CIBA Summit, N. J.

2/21004



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and the 60-10-70 Basic Plan

Correct medication is important in initiating control that leads to development of good eating habits, essential in maintaining normal weight. 1.2.1

Obedrin contains:

- · Methamphetamine for its anorexigenic and mood-lifting effects.
- · Pentobarbital as a corrective for any excitation that might occur.
- Vitamins B₁ and B₂ plus niacin for diet supplementation.
- · Ascorbic acid to aid in the mobilization of tissue fluids.

Obedrin contains no artificial bulk, so the hazards of impaction are avoided. The 60-10-70 Basic Plan provides for a balanced food intake, with sufficient protein and roughage.

Formula:

Semoxydrine HC1 (Methamphetamine HC1) 5 mg.; Pentobarbital 20 mg.; Ascorbic acid 100 mg.; Thiamine HC1 0.5 mg.; Riboflavin 1 mg.; Niacin 5 mg. 1. Eisfelder, H.W.: Am. Pract. & Dig. Treat. 5:778 (Oct.) 1954. 2. Sebrell, W.H., Jr.: J.A.M.A. 152:42 (May) 1953. 3. Sherman, R.J.: Medical Times, 82:107 (Feb.) 1954.

Write for 60-10-70 Menu pads, Weight Charts, and samples of Obedrin.

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Forensic Medicine

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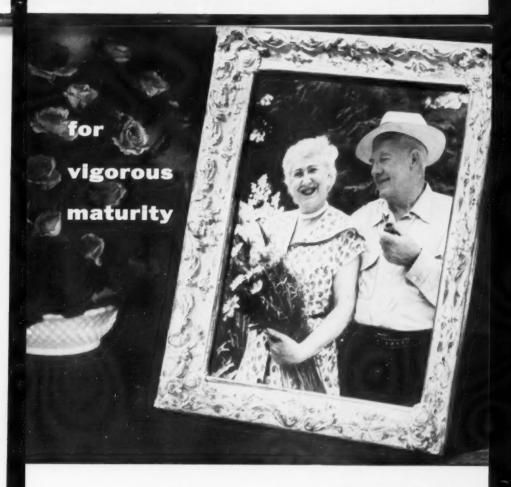
Accidents-Office

PROBLEM: An 83-year-old patient, who was mentally alert but had defective hearing and vision, fell upon the floor as she attempted to step down from a medical examination table. She sustained a fracture of the right humerus. Was the doctor liable?

COURT'S ANSWER: Yes.

The patient testified that as the doctor left the room after the examination he said "all right," from which she inferred that she could get off the table. She said that the physician was not present when she attempted to alight, that she groped with her foot for the stool she had used in getting on the table but could not locate it, that she slipped and fell as she descended, and that it was several minutes before her calls brought the doctor from another room. The doctor testified that he was in the room and saw her leaving the table but that she moved too fast for him to aid her.

The case was tried by a justice of the New York Supreme Court, Trial Term, New York County, without a jury. He believed the patient's testimony and decided that the doctor was responsible for the injuries (143 N.Y. Supp. 2d 809).



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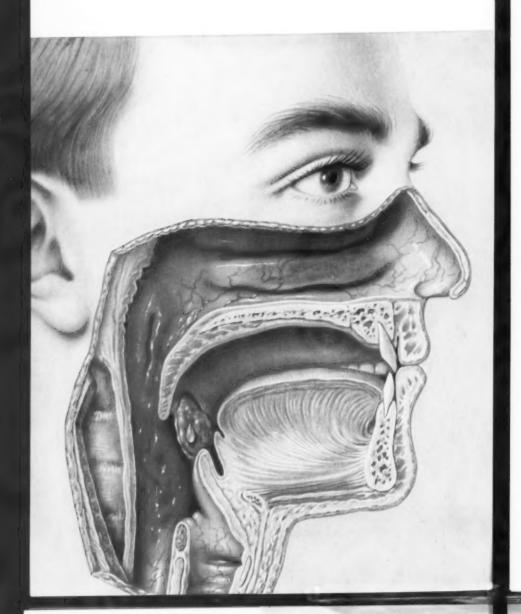
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Most useful antibiotic for the most prevalent infections..



ILOTYCIN

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Over 96% of all acute bacterial infections of the respiratory tract are caused by organisms highly sensitive to 'Ilotycin.'

The most effective antibiotic against staphylococci.

More than 90% of all staphylococci encountered in private practice are highly sensitive to 'Ilotycin'—more than to any other antibiotic.

More effective against streptococci than the tetracyclines.

'Ilotycin' is bactericidal. The great majority of throat cultures become negative within twenty-four hours. Thus, the possibility of complications is minimized.

Fully as effective against pneumococci as any other antibiotic.

In pneumococcus pneumonia, fever and acute symptoms subside within forty-eight hours. The pneumococcus-killing action of 'Ilotycin' is especially desirable in elderly patients and in debilitated states.

Safe and well tolerated.

Staphylococcus enteritis and avitaminosis have not been encountered.

Dosage: 250 to 500 mg. q. 6 h.

Children, 5 mg. per pound of body weight q. 6 h.

Tablets, pediatric suspensions, drops, I.M. and I.V. ampoules.

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Lilly

FORENSIC MEDICINE

Malpractice—Plastic Surgery

PROBLEM: A patient sued for damages for alleged malpractice in plastic surgery of his chin. Was he bound to produce evidence demonstrating what technic the surgeon used?

COURT'S ANSWER: No.

So decided the California District Court of Appeal, Second District (285 Pac. 2d 288).

Compensation—Surgery

PROBLEM: Can workmen's compensation benefits be denied because an injured employee refused surgery, if the worker *was mentally or physically unable to make a choice?

COURT'S ANSWER: No.

The Georgia Court of Appeals declared that an employee's widow

was entitled to benefits, inasmuch as there was no proof that the deceased had been aware of the need for surgery (86 S.E. 2d 637).

Phenol Burns-Opinion

PROBLEM: At a manslaughter trial, a physician said that he believed that burns on decedent's face were caused by application of a solution of more than 10% phenol by a face rejuvenator. No specimen of the skin was tested, and the doctor based his opinion on the postmortem study, previous examinations of other phenol burns, and case reports. Was the testimony receivable?

COURT'S ANSWER: Yes.

So decided the California District Court of Appeal, Second District (281 Pac. 2d 337).

in rheumatoid arthritis

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METICORTelone

PREDNISOLONE (metacortandralone)

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"possesses an augmented therapeutic ratio" over cortisone and hydrocortisone

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Avoids habit formation, addiction; does not cause drowsiness, nausea, or constipation; yet 10 mg equals 15 mg of codeine in cough suppressant effect. Tablets, 10 mg; syrup, 10 mg/4 cc. Romilar® Hydrobromide - brand of dextromethorphan hydrobromide. Hoffmann - La Roche Inc Nutley · N. J.



Hoffmann - La Roche Inc

Nutley · N. J.

Embolism—Traumatic Cause

PROBLEM: On March 19, a workman's leg was struck by a hammer, and thrombophlebitis ensued. Cerebral embolism occurred April 21, and the worker died May 25. Was workmen's compensation payable?

COURT'S ANSWER: No.

At the workmen's compensation hearing, a doctor who had treated the employee testified that a clot had passed through the blood stream from the leg to the brain. A second attending doctor attributed the death to the accident but admitted that the patient had had arteriosclerosis and that it was impossible for the clot to pass to the brain. A third doctor agreed on the latter point and testified that death was caused by the cerebral stroke.

FORENSIC MEDICINE

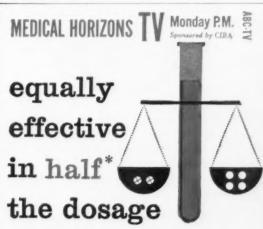
The Pennsylvania Superior Court said that denial of an award by the compensation board was based upon sufficient medical testimony and should not be disturbed (115 Atl. 752).

Evidence—Criminal Cases

PROBLEM: A motorist was convicted of criminally negligent driving while intoxicated. Was he entitled to a new trial because a physician testified that accused had refused to submit to a blood test for alcoholic content?

COURT'S ANSWER: Yes.

The New York Supreme Court, Appellate Division, Third Department, said that the testimony was not admissible (143 N.Y. Supp. 2d 362).



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SAFE, SOLUBLE, BROAD-SPECTRUM SULFONAMIDE

TABLETS 0.5 Gm. (White, double-scored) SUSPENSION IN SYRUP
0.25 Gm. per 4-ml. teaspoonful

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SUMMIT. N. J.

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MODERN MEDICINE, November 15, 1955 49



Made by the same manufacturers who equip many of the nation's hospitals, Royal Reception Room Furniture is designed to put the patient at ease. Beautifully made and sturdily constructed for years of dependable service, Royal chairs and settees add both charm and distinction to your waiting room. They come in a wide variety of styles, upholsteries, colors and finishes and of course there are matching smoking stands and tables.

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Relief of temporary constipation:

Agoral is suited to the acutely constipated patient who can neither take time off for a "purge," nor time-out to answer the sudden urge induced by strong laxatives: the head of a one-man business; the executive committed to a day of important conferences; the bus driver on a long haul; people in the theatre, the pulpit, the factory, the home. For all who need relief of temporary acute constipation, pleasant tasting Agoral provides positive results without urgency.

No urgency; evacuation which adjusts to schedule: A dose taken at bedtime almost invariably produces results the following day. Elimination is comfortably achieved by mild, positive peristaltic action, not by

violent paroxysms of unrestrained hyperperistaltis.

No griping; interim discomfort avoided: Agoral's action is sustained uniformly during its passage through the intestinal tract; and it causes no uncomfortable griping, embarrassing flatulence, distention or stomach distress.

Dosage: On retiring, ½ to 1 tablespoonful taken in milk, water, juice or miscible food. Repeat if needed the following morning two hours after eating. Contraindications: symptoms of appendicitis; idiosyncrasy to phenolphthalein.

Supplied: bottles of 6, 10 and 16 fluidounces; and as Agoral Plain (without phenolphthalein), bottles of 6 and 16 fluidounces.

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mineral oil emulsion with phenolphthalein

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first with intravenous form and pediatric oral liquid

first color-coded tablets to avoid dosage error

digitalis glycoside isolated (digitoxin)

first digitalis glycoside with specific intramuscular form—
avoids irritation often encountered when intravenous
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first with a complete range of interchangeable dosage forms to meet the patient's changing needs

Consult your Physicians' Desk Reference for dosage information.

Originators of the Cardiology Desk-Aid Series. Send for complimentary set.

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salt substitute of choice

for congestive failure
essential hypertension
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TASTE
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Keeps food attractive—
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avoids borderline hypopotassemia—makes DIASAL
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DIASAL contains only potassium chloride, glutamic acid and inert ingredients...no sodium, lithium, or ammonium... and it is safe for prolonged use, both at the table and in cooking. packaging: available in 2-ounce shakers and 8-ounce bottles. Send for liberal supplies of tasting samples and low-sodium diet sheets for your patients.

*Fremont, R. E.; Rimmerman, A. B., and Shaftel, H. E.; Postgrad. Med. 10:216, 1951.

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severe infectious disease,
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convalescence with

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Patients who suffer unusual physiologic stress need proper vitamin supplementation to hasten their convalescence. Stresscaps (based on the formula suggested by the National Research Council) provide the necessary vitamins in a dry-filled capsule for rapid and complete absorption. Average dose: in convalescence—1 capsule daily; in severe conditions—2 capsules daily.

Each capsule contains:	
Thiamine Mononitrate (B1)	10 mg.
Riboflavin (B2)	10 mg.
Niacinamide	100 mg.
Ascorbic Acid (C)	300 mg.
Pyridoxine HCl (B ₆)	. 2 mg.
	4 mcgm.
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Vitamin K (Menadione)	. 2 mg.



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Washington Letter

The Pros and the Cons on Clinics for Drug Addicts

SEN. Price Daniel's (D., Tex.) Judiciary Subcommittee is about to wind up its investigation of narcotic addiction and write a report for the next session of Congress, recommending ways in which the Federal government can help.

From a medical standpoint, one major issue has developed out of the long hearings, conducted in various sections of the country: Should the present policy of punishment-plus-treatment be extended, or should punishment of addicts be dropped in favor of low-cost narcotics, given under medical supervision?

Shortly after the Harrison anti-



"I don't know whether it's indicative of anything or not, but I simply never can remember our President's name."

narcotics law was passed forty years ago, a system of clinics for addicts was set up. Authorities in this field now generally agree that the clinics were a dismal failure; they promoted addiction instead of discouraging it. There is disagreement, however, as to whether they failed because the basic idea was wrong, or because of the lack of intelligent medical supervision.

A leader in the back-to-the-clinics movement is the highly respected New York Academy of Medicine. One of its spokesmen is Dr. Hubert S. Howe, clinical professor of neurology at Columbia University, who was a witness before the subcommittee in New York City. Like others who share this view, Dr. Howe believes that clinics alone would not be the answer, that they must be combined with careful medical attention and follow-up treatment in the community. Nor would dispensing of narcotics at reasonable rates be confined to clinics—any private physician would be permitted to give the injections.

Dr. Howe points out that under present federal law the physician is forbidden to do this. The language of the law reads:

An order purporting to be a prescription issued to an addict or habit-(Continued on page 58)

How to treat a patient to something sweet and sugar-free



Here's a new dessert as good as chocolate for your patient's morale, yet, it's sugar-free.

New D-ZERTA Pudding contains as little as 54 calories per serving, It's sweetened with Sucaryl® and saccharin and comes in three flavors—CHOCOLATE, BUTTERSCOTCH and VANILLA.

D-ZERTA Gelatin is sugar-free, too. Contains only 12 calories per serving. It's sold in all 6 famous Jell-O flavors.



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RECTAL MEDICONE

relieves painful anal lesions — ulcers abrasions — thrombosed hemorrhoids

■ In serious rectal involvement—where severe pain and discomfort are the patient's chief complaint¹— the insertion of Rectal Medicone affords dramatic relief, thus enabling the clinician to proceed with therapeutic measures for treatment of the basic condition.

millions prescribed yearly...

¹Bargen, J. A., and Jackman, R. J., Journal Lancet, 72:11, Nov., 1952.



MEDICONE COMPANY . 225 VARICK STREET . NEW YORK 14. N.Y.

WASHINGTON LETTER

ual user of narcotics, not in the course of professional treatment in an attempt to cure the habit, but for the purpose of providing the user with narcotics sufficient to keep him comfortable by maintaining his customary use, is not a prescription within the meaning and intent of the act; and the persons filling and receiving drugs under such an order, as well as the person issuing it, will be regarded as guilty of violation of the law.

Commenting on this, Dr. Howe said:

Addiction is the only disease, with which I am acquainted, in which physicians are prohibited by law from furnishing the patient sufficient comfort that he may engage in a useful occupation.

The American system to control narcotic addiction, in the opinion

of Dr. Howe, has been a complete failure.

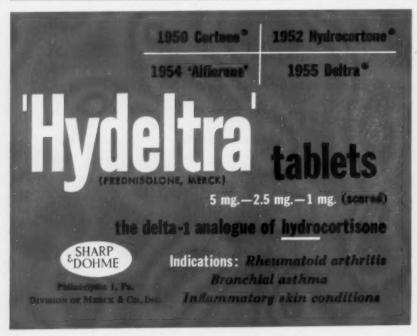
Our federal government attempts to curb the spread of addiction through suppression of illicit traffic in narcotic drugs by international and domestic action. The situation has become so acute and so difficult to handle that even the great and efficient law-enforcement agencies of the U.S. government have been unable to cope with it.

He then quoted Harry Anslinger, Commissioner of Narcotics, as saying:

If you had the Army, the Navy, the Coast Guard, the F.B.I. and the Customs Service and our narcotics service, you would not stop heroin coming through the port of New York.

On the question of the number of addicts in this country, there is

(Continued on page 63)



MAXIMUM SAFE ANALGESIA

in whatever potency each patient may require

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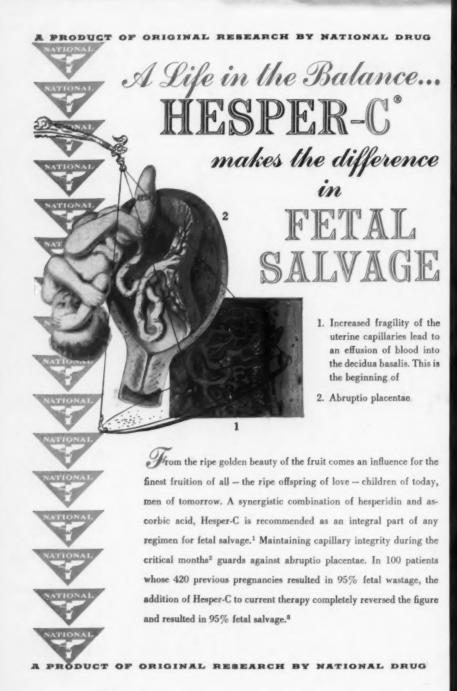
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SUPPLIED: Hesper-C (hesperidin 100 mg, and ascorbic acid 100 mg.) capsules are available in bottles of 100 and 1000,

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WASHINGTON LETTER

no agreement. Mr. Anslinger, who is greatly concerned with the problem, says there probably are no more than 50,000. Almost all others experienced in the field place the total much higher.

Whatever the total is, Dr. Howe emphasizes, it is many times that of the United Kingdom, "where the patient's physician is the sole judge as to whether the patient should have continued administration of drugs and the amount prescribed." In the United Kingdom there are only 317 known addicts—169 women and 148 men.

The British physician is guided by this law:

The continued supply of drugs to a patient, either directly or by prescription, solely for the gratification of

addiction, is not regarded as a "medical need." However, morphine or heroin may properly be administered to addicts in the following circumstances, namely: [a] where patients are under treatment by the gradual withdrawal method with a view to cure, [b] where it has been demonstrated, after prolonged attempt to cure, that the use of drugs cannot safely be discontinued entirely on account of the severity of the withdrawal symptoms produced, or [c] where it has been similarly demonstrated that the patient, while capable of leading a useful and relatively normal life when a certain minimum dose is regularly administered, becomes incapable of this when the drug is entirely discontinued.

Whatever Dr. Howe's arguments and appeals, there were not many witnesses appearing at the hearings who would agree with him.

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WASHINGTON LETTER

The alternative, supported by a preponderance of those testifying, would be an expanded and carefully administered federal-state plan, with addicts committed first to a federal hospital, then, when apparently cured, released to their home communities where close attention would be paid to follow-up treatment.

Spokesmen for the American Medical Association said the AMA policy was still:

 Opposition to the ambulatory treatment of addicts, whether by a private physician or in clinics.

Condemnation of doctors who provide addicts with prescriptions for drugs under the guise of treatment.

3. Special federal and state insti-

tutions for the treatment of addicts, and follow-up and supervision of addicts after discharge from these hospitals.

However, there was one hint of encouragement for those who favor clinics; the AMA witnesses said the association had its policy on narcotics under intensive study and review.

Surgeon General Scheele reviewed for the committee the experience Public Health Service has had with the 50,000 or so addicts that have been admitted to its special hospitals. He concluded that there might be mistakes, but that on the whole this country was moving in the right direction. He recommended special hospitals, which are "essential to effective treatment—

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WASHINGTON LETTER

particularly for the withdrawal of physical dependence and for the initial stages of psychotherapy and rehabilitation."

Dr. Scheele also indorsed a careful follow-up program, and proposed that the federal government encourage and assist in the establishment of proper community facilities for the help of the addict who has been discharged from the hospital.

Narcotics Commissioner Anslinger was opposed to experimenting with clinics and low-cost drugs, as was George Larrick, Commissioner of the Food and Drug Administration.

The Association of State Attorneys General proposed its own plan of special regional hospitals for addicts and, like the American Bar Association, avoided giving any support to the clinics idea.

Before the hearings were over, Chairman Daniel made it plain that he was on the side of tough punishment, rather than cheap drugs. He recommended the death penalty for drug peddlers under certain conditions.

Washington Notes

¶ Although states tend to favor public programs for Salk vaccine inoculations, there is still a place for the private physician; even in a public program (with no means test) the private doctor may give the shots in his office, and be paid by the day or by the patient, with the understanding that he is acting as agent for city, county, or state.



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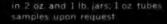
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- 1. Kline, P. R., and Caldwell, A. New York St. J. M. 52:1141, 1952
- 2. Schoch, H. G.: The Schoch Letter, May 1952.
- Welch, A. L. and Ede, M.
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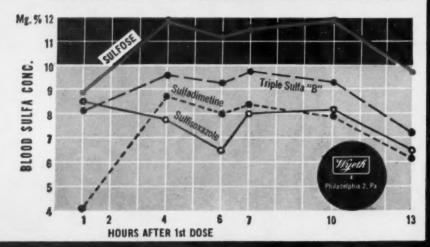
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 Berkowitz, D.: Antibiot, & Chemo. 3:618 (June) 1953

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MODERN 🗟 MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

THE EDITOR'S PAGE

by WALTER C. ALVAREZ, Editor-in-Chief

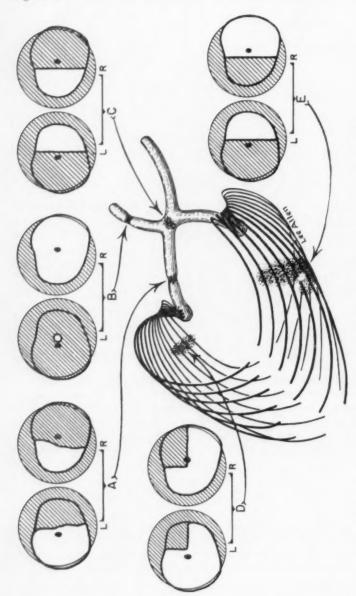
Hereditary Defects in Metabolism

An interesting article on congenital hypoprothrombinemic states by Drs. Armand J. Quick and Anthony V. Pisciotta and Clara V. Hussey (Arch. Int. Med. 95:2-14, 1955; Modern Medicine, May 1, 1955, p. 84) reminds me that as laboratory investigators become more expert in identifying the chemical processes by which certain physiologic actions are effected, the cause for some poorly understood chronic disease is elucidated. Also the carriers of the disease are recognized. Thus, with the discovery of hypoprothrombinemia by Rhoads and Fitz-Hugh, expert blood men are able to show how hemophilia is passed onward by persons who, although they stay well, have definite slight changes in their blood.

For years it has been known that persons with porphyrins in their urine are commonly neurotic and subject to severe abdominal pain. They do not tolerate barbiturates; some cannot stay out in the sun without getting their skin deeply blistered, and some will die after an operation, especially if it is performed under Sodium Pentothal anesthesia. Dr. Geoffrey Dean of Port Adelaide has shown that all the cases observed in South Africa can be traced back to a settler with porphyria who went out some two hundred years ago and founded a large family.

The older I get the more I am impressed with the probability that many chronic diseases are largely incurable because the person involved was born with a defective gene. As a result he cannot metabolize some substance which, circulating in his body unchanged, does harm to his skin, his collagen tissues, his brain, or his nerves.

Figure 1



Typical Visual Field Changes Depending on Site of Lesion in Visual Pathway

Diagram of the visual pathway showing typical visual field changes from lesions in [Al optic tract; [Bl optic nerve; [C] optic chiasm; [D] lower part of optic radiation (Meyer's loop); [E] optic radiation (parietal or occipital lobe)

Special Article

The Role of Visual Fields in Diagnosis

P. J. LEINFELDER, M.D.*
University of Iowa, Iowa City
Prepared for Modern Medicine

VISUAL fields are objective quantitative representations of a subjective test that give valuable aid in the diagnosis of many ocular and neurologic diseases. The fields indicate the degree of anatomic and physiologic integrity of the visual apparatus; variations from normal are due to affection of any part of the pathway from the retina to the occipital cortex.

The location of the lesion determines the type of field defect (Fig. 1), because lesions of the retina and optic nerve usually produce monocular defects, while all others cause changes in both visual fields. Thus the typical change with disease of the optic chiasm is bitemporal hemianopsia, while involvement of the visual pathway behind the chiasm always results in an homonymous anopsia on the side opposite to the lesion. The effect of disease may be partial or complete, progressive or stationary, congruous or incongruous. Usually lesions in the optic radiation or occipital cortex produce more congruous defects in the two eyes than do tract lesions. More extensive defects are caused by larger lesions and progressive changes are due to active disease.

It should be emphasized that there is no correlation between the peripheral visual field and visual acuity. The type of test or the size of test object is not dependent upon the visual acuity, because a person may have very poor central vision and normal peripheral fields or normal acuity and practically no peripheral field.

Visual fields may be taken in several ways. The gross confrontation method is of some value in estimating complete and extensive defects, but because it has no quantitative value, more accurate methods are used in clinical practice. The perimeter enables one to outline the absolute limits of the visual field and is of particular value in neurologic diagnosis (Fig. 2). The tangent screen allows more refined testing of the central 30 degrees of the visual field, and although accurately applicable to neurologic diagnosis, it is of especial value for studying the fixation and blind spot areas.

Many ophthalmologists employ the tangent screen exclusively. The

Professor of Ophthalmology, College of Medicine, State University of Iowa, Iowa City.

stereocampimeter is sometimes used for detailed observation of the central field, particularly with a unilateral central scotoma. The accuracy of the test, either with the perimeter or the tangent screen, depends upon the reliability of the patient, the skill of the operator, and the size of the test object. Usually, with the perimeter, a 3-mm. white test object is used. The standard test object for the tangent screen is a 1-mm, white target used at a distance of 1,000 mm. At times, for very precise work, a distance of 2,000 mm. is used, retaining the 1-mm. test object. Only when a 1-mm. target is used at

1,000 mm. does one outline the normal limits of the field on the tangent screen. A larger test object is easier to work with, but many early defects are then missed, because the peripheral limits of visibility of a larger target are definitely outside the limits of the tangent screen.

Each test object at an established distance—1,000 mm.—has a definite peripheral limit of visibility. The line representing the limits of the field for a given test object and distance is called an isopter and the size of the tangent screen is such that only the 1/1,000 and smaller isopters can be outlined on it. Colored test objects are used to en-

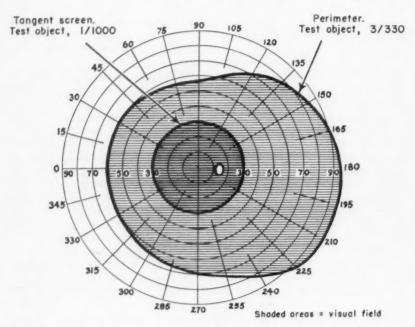


Fig. 2. Perimetric examination encompasses the entire visual field while the target screen represents only the central 30 degrees.

hance the sensitivity of the test in the central region. Thus a 1/1,000 red target is equivalent to approximately 0.1/1,000 white. Blue, green, and red test objects are occasionally used to outline the peripheral field.

The ophthalmologist places great dependence on the visual fields for diagnosis and evaluation of effectiveness of treatment in a number of diseases. By far the most important of these is glaucoma, because in both diagnosis and follow-up the visual fields are of great significance. In this situation, accuracy is particularly important, and the tangent screen is the method of choice. In suspected glaucoma most perimetrists use a 1/1,000-mm. target to search for changes in the nasal periphery or enlargement of the blind spot, but others feel that the only accurate way to get the earliest change is to use a 1/2,000-mm. test object. With this target the normal temporal field passes just

outside the blind spot; if glaucoma has caused any damage, the peripheral limit is contracted and the blind spot is bared. The temporal border lies outside the limits of the field (Fig. 3).

Often more definite evidence of glaucoma is observed and an arcuate or Bjerrum scotoma or Rönne step is seen. These changes are usually permanent, but institution of proper treatment should prevent further loss. The cessation of progressive change is determined by repeated tests, which must be made at intervals throughout the patient's life. Thus, quantitative records of the status of the patient's central and peripheral fields are always available for reference and these will indicate the need for changes in medication or the necessity for operative interference.

Variations in the visual fields may occur because of fatigue, emotional distress, pre-test exposure to bright light, or pupil size. Often

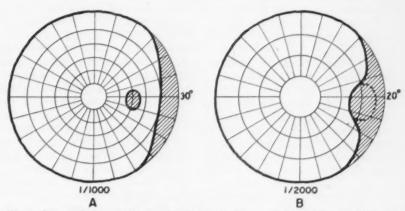


Fig. 3. [A] A slight loss in the temporal field has no relationship to the form of the blind spot when a 1/1,000 test object is used. [B] A slight loss in the temporal field results in "baring of the blind spot" when a 1/2,000 test object is used.

the field appears worse in glaucoma because of the narrow pupils induced by the miotic therapy. Care must be exercised to avoid these sources of error, lest the patient be unnecessarily subjected to surgery. If the visual field appears to have become worse, it should be rechecked under conditions that approach those of the previous satisfactory examination. When the diagnosis of glaucoma is made and a miotic is prescribed, it is a good practice to immediately check the visual field so that the basic field with small pupils will be available for future reference.

Whenever there is a loss of visual acuity that is not correctible to normal with lenses, it is advisable to check the visual fields for a central scotoma. This is preferably done with the tangent screen. Fixation at the center of the screen is usually maintained by making a large cross on the screen with adhesive tape, the arms extending out from the fixation point. The patient can easily look to the point where the horizontal and vertical arms would cross.

The central scotoma indicates poor vision, and conversely reduced vision usually means that a central scotoma exists. However, when the central blind area has been present for a number of years, the patient has so well compensated for it by shifting fixation to areas outside the scotoma that it cannot be demonstrated. Loss of acuity and central scotoma may occur from retinal disease in which there is ophthalmoscopic evidence of defective vision in the macular region, but if

the optic nerve is acutely involved there may be no evidence of change in the fundus. Retrobulbar neuritis is the usual affection that causes loss of central vision without ophthalmoscopic evidence. This is often due to multiple sclerosis, but may occur because of intoxication with substances such as aniline. lead, and wood alcohol. Deficiency in thiamin hydrochloride, associated with starvation, heavy smoking of pipe and cigars, and excessive consumption of alcohol, may become manifest with the symptoms of retrobulbar neuritis. A central scotoma is usually demonstrable, but the initial sign is a scotoma in the region between the macula and nerve head. This nucleus gradually enlarges to form a centrocecal scotoma.

Inflammatory vascular and degenerative changes in the macula cause loss of central vision and the visual fields illustrate the amount of involvement of the central area. The central scotoma becomes a quantitative index of the progress or regression of the disease process, thus enabling more accurate estimation of the status and prognosis of the disease. Similarly, with retinal detachment, defects in the visual fields indicate the extent of the process and, after treatment, give objective evidence of the degree of improvement. Of course, the diagnosis is obvious by ophthalmoscopic examination, and in many instances only a small segment of the peripheral field remains. Ophthalmoscopic evidence of disease is seen with choroiditis, retinitis pigmentosa, and tumors, but often

the visual field furnishes a necessary record for determining the progress of the disease.

Many confusing alterations in the visual fields may be encountered with cataract. This often occurs with nuclear sclerosis for it may cause a small central scotoma. However, in this instance, visual acuity is normal when a 1-mm. pinhole aperture is placed before the dilated pupil. Sector defects and concentric contractions are demonstrated when there are quadrantic or more extensive defects in the peripheral portions of the lens. Even though these lens opacities can be seen with the ophthalmoscope, confusion may occur in interpreting the visual fields. This is particularly true if there is some elevation in the ocular pressure or if the fields simulate homonymous defects.

In the diagnosis of neurologic disease, both the neurologist and the ophthalmologist depend upon the visual fields for localization of the site of the disease process. Since the visual pathway is in close proximity to the carotid artery, the arterial circle of Willis, the pituitary, and the first, third, fourth, fifth, and sixth cranial nerves at the basal area, most diseases that affect the region will cause changes in the visual field. Furthermore, the pathway posterior to the chiasm is adjacent to the cerebral peduncles and the temporal, parietal, and occipital lobes of the brain. This offers considerable probability that the visual fields will be affected when tumor, inflammation, or vascular disease involves these areas.

In addition the optic nerve may be primarily or secondarily involved in a number of diseases of the central nervous system.

Optic atrophy is the basic disease of the nerve, although in most instances changes in the visual field are recognizable long before true atrophy is observed. This is because interference with function occurs before anatomic change becomes manifest. With primary atrophy of the optic nerve, there is a gradual narrowing of the visual field by concentric contraction which at first only slightly decreases the extent of the field. This reduction continues until only a small island exists about the fixation point (Fig. 1B). This is eventually lost, and the eye is then blind. The loss of field and visual acuity may occur suddenly in trauma that causes laceration or crushing of the nerve or hemorrhage in the optic canal. The loss is gradual when caused by tabes or tumor.

Optic atrophy may also occur as the result of degeneration in the axial portion of the optic nerve. With multiple sclerosis, retrobulbar neuritis, usually unilateral, occurs as the first sign in a great many patients. This causes a central scotoma that may be small (5° radius) at first but gradually enlarges to involve the entire field. In about one-half of the patients vision returns, often to normal, after a period of days or weeks of partial or complete blindness. Retrobulbar neuritis from other causes is often bilateral.

With lesions in the region of the chiasm, most valuable information

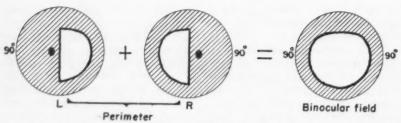


Fig. 4. Combining the two nasal hemifields allows a patient with bitemporal hemianopsia to have a restricted whole field.

is obtained from visual fields. This is not only because bitemporal hemianopsia is typical of lesions of the region, but because many do not produce general signs or symptoms. This is typically illustrated by chromophobe adenoma in which the changes in the visual fields are often the only clinical indication of the disease. With only the symptom of persistent headache and the evidence presented by a superior temporal defect in the field of one eye, a presumptive diagnosis of the pituitary tumor may be made. This is substantiated by enlargement of the sella turcica on roentgenograms.

Several diseases cause pressure on the optic chiasm, and all of them cause partial bitemporal anopsia at first, but as the disease progresses complete hemianopsia gradually develops. When bitemporal hemianopsia is complete, the patient retains a circular binocular field of approximately 50 degrees (Fig. 4). This results from the blending of the nasal hemiopic fields of each eye. The causes for bitemporal hemianopsia are pituitary tumor, meningioma of the prechiasmic tubercle, suprasellar cyst, and dilated

third ventricle resulting from obstruction of the aqueduct of Sylvius. The bitemporal hemianopsia resulting from chromophobe adenoma of the pituitary is incongruous in type, the field in one eye being approximately one quadrant more extensive; the upper quadrants are initially affected. The bitemporal hemianopsia resulting from other conditions is congruous in type. Choked disk is found when the third ventricle is dilated and is sometimes found with suprasellar cyst.

Altitudinal hemianopsia results from diffuse pressure from below or above on the visual pathway. This occurs at the chiasm and is most frequently due to inflammation. The fibrosis in the meninges constricts the vascular supply of the chiasm and the function of the nerve fibers is impaired. Altitudinal defects may be congruous but more frequently are very dissimilar. Other causes are hemorrhage and aneurysm at the base.

Binasal hemianopsia is an infrequently encountered defect, but when present, is considered to be a sign of sclerosis of the internal carotid arteries.

Homonymous hemianopsia is a frequently occurring field defect in intracranial disease. It is the typical manifestation of involvement of the visual pathway anywhere posterior to the optic chiasm. The defect may be congruous or incongruous and usually the more congruous fields are the result of lesions in the optic radiations or occipital cortex (Fig. 1A and 1E). It is commonly stated that the more posterior the lesion the more congruous the field defect. An incomplete involvement of the pathway will cause an incomplete homonymous loss and progressive lesions tend to show considerable difference in the size of the defect with small and larger test objects.

Quadrant anopsia from pressure on or destruction of the inferior or superior portion of the radiating fan of fibers that extend from the lateral geniculate body to the occipital cortex is frequently observed. The superior quadrants are affected when the posterior portion of the temporal lobe is diseased and Meyer's loop of the optic radiation is compressed (Fig. 1D). This is commonly seen with abscess of the temporal lobe after mastoid disease. Vascular disease or tumor may be responsible for quadrantic or hemianoptic defects.

The diagnosis of the site of the lesion causing hemianoptic defects in the visual field is a significant consideration. The type of homonymous defect, the recognition of other local signs and symptoms, and the general state of the patient are of importance. Involvement of the ocular motor nerves and the hemianoptic impairment of the pu-

pillary light reflex indicate disease in the region of the optic tract. Congruous and quadrantic changes in the field are usually caused by posterior lesions. In diagnosing the site of the lesion, it should be borne in mind that approximately 75% of the hemianoptic defects are due to lesions posterior to the lateral geniculate body. These are caused by tumors, trauma, and vascular disease (hemorrhage and occlusion).

Meningioma or other tumor occurring between the occipital lobes can cause oblique hemianopsia (Fig. 5A). This is due to greater disturbance in the visual cortex on one side than the other. This field defect is pathognomonic of a tumor in this region. Another peculiarity of lesions in the occipital lobe is the incomplete nature of the defect (Fig. 5B). Because the peripheral field of vision is represented in the most anterior portion of the calcarine cortex and the macular region in the occipital pole, early lesions may affect exclusively the central or peripheral portion of the field. This is usually demonstrated only on fields made with the perimeter.

Macular sparing is an interesting physiologic phenomenon but except in vascular disease has no diagnostic significance. True macular sparing occurs when there is occlusion of one calcarine artery; this results in ischemia of all the visual cortex on one side except the macular portion at the posterior pole. This area is supplied by the middle cerebral artery; its function, therefore, is preserved. However, macular sparing may or may not be present

when there is tumor or even extirpation of the occipital lobe. Since macular sparing has been demonstrated when the lesion was in the optic tract, or even in the chiasm, it is unwise to localize a lesion on the basis of its presence or absence.

Functional disturbances in the visual field may be disturbing when not expected, or they may be diagnostic of the underlying psychiatric nature of the patient's complaints. Many patients when fatigued, distressed because of illness, disinter-

ested, or simply uncooperative may have concentrically contracted visual fields. The peripheral outlines may be from 10 to 15° within the normal limits. Sometimes these can be improved by rest or relief from the distress of illness, but in many instances the contracted fields must be accepted as the most normal for that patient.

The gun-barrel type of field differs from this in that a small field (5°) is outlined with the initial target, and this same size field is

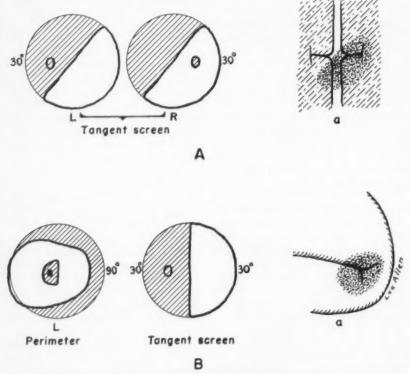


Fig. 5. [A] Oblique hemianopsia results from a tumor between the [a] occipital lobes. [B] Incomplete left homonymous anopsia occurs with partial destruction of the [a] calcarine cortex.

outlined with any larger test object used. The same area is outlined if the patient is moved back to 2 meters. A similarly spectacular change in the peripheral field is the spiral contraction. Initially, the patient sees the test object in the peripheral region as does the normal person, but each succeeding stimulus with the test object brings the point of visibility slightly closer to the fixation point. In this way, a spiral field is outlined (Fig. 6). This and the gun-barrel type of field are pathognomonic of hysteria.

Simulated defects in the visual fields are occasionally encountered. These are not easily recognized, but if suspected the fraud can sometimes be exposed by repeated testing and the use of several size test objects, varying the distance from the screen or using the stereocampimeter.

SUMMARY

Visual fields, when done by the tangent screen method and/or perimeter, give valuable information that can lead to the establishment of the site and often the cause for

the cerebral disease. Carefully performed tangent screen tests are of primary importance in the diagnosis and treatment follow-up in glaucoma, retrobulbar neuritis, and optic atrophy. Visual fields form valuable records of the diagnosis and progress of retinal detachment, degenerative diseases such as retinitis pigmentosa, and various affections of the macula. The technic used (tangent screen or perimeter) depends upon the type of disease being studied, the general status of the patient, and the quality of information required.

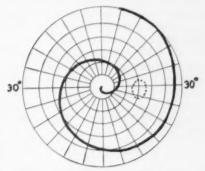


Fig. 6. Spiral field encountered in hysteria

¶ CHRONIC INTESTINAL AMEBIASIS responds better symptomatically to Terramycin than to Diodoquin, probably because of the powerful antibacterial activity of Terramycin. However, Yasin Abd El-Ghaffar, M.D., of Abbasiah Faculty of Medicine, Cairo, and Mohamad Abd El-Ghaffar, M.V.Sc., of Veterinary Research Institute, Doukki, Egypt, report that parasitic relapses occurred in 42% of 72 patients given Terramycin, as compared to 32% of 58 subjects given Diodoquin. Since concentrations lower than 1:10,000 stimulate growth of amebae, Terramycin should be given in doses of 0.5 gm. every six hours for twelve days or 0.5 gm. every four hours for eight days.

Gastroenterology 29:86-95, 1955.

Use of Digitalis Preparations

CALVIN F. KAY, M.D.

University of Pennsylvania, Philadelphia

Excellent results are generally obtained if digitalis is used with care and skill.*

Various digitalis preparations differ little except in rate of accumulation and decline in the body. Rapidly acting intravenous compounds should be employed with caution. Digitalis leaf or digitoxin provides more stable maintenance than relatively labile products.

Toxicity can generally be traced to mismanagement. Digitalis poisoning may be increased by electrolyte imbalance, especially potassium deficiency. Supraventricular tachycardias of some types should be recognized as warnings.

TYPES OF PREPARATION

Digitalis drugs include derivatives of Digitalis purpurea, Digitalis lanata, and certain kinds of Strophanthus. Although the many commercial names are difficult to remember, family relationships should be known. The grandparents are galenical vegetable products, the adult working parents are glycosides, and the grandchildren are aglycones, only 1 being a standard pharmaceutical.

The sole grandparent in general use is the whole leaf, *Digitalis purpurea*. Derivatives are digitoxin,

from a single glycoside, and amorphous gitalin, a mixture of natural glycosides.

Digitalis lanata yields lanatosides A, B, and C. From A come digitoxin and acetyl digitoxin; from C, digoxin. Digilanid is a mixture of the 3 lanatosides.

Ouabain is obtained from Strophanthus gratus seeds or ouabao wood. Strophanthin K is a mixture of glycosides from Strophanthus kombé.

Acetyl strophanthidin is a synthetic elaboration of the aglycone strophanthidin. The action of this agent begins and ends more rapidly than with any other member of the group.

NATURE OF ACTIVITY

A cardioactive glycoside relieves heart failure chiefly by increasing contractile force of the heart muscle. Treatment does not augment output of a normal heart or of one enlarged but not failing. Diuresis of water, sodium, and chloride is a secondary effect.

Digitalis also influences cardiac excitability, automaticity, conductivity, and refractory period. Thus ventricular rate may be controlled in atrial fibrillation and flutter, or arrhythmia converted to sinus rhythm. The same properties yield undesirable effects.

^{*}The clinical use of digitalis preparations. Circulation 12:116-123, 291-304, 1955.

DIGITALIS AND CATIONS

Potassium deficiency is common with congestive failure, even if serum level is not disturbed. Anorexia, acidosis, malnutrition, diabetes, and renal dysfunction may be contributing factors. Treatment with the mercurial diuretics, ammonium chloride, resins, Diamox, or cortisone also increases the shortage. When potassium is depleted, toxicity results from smaller amounts of digitalis and lasts longer.

Calcium and digitalis are synergistic in prolonging muscle contraction. Sudden death may result from combined therapy.

THERAPEUTIC ACTIVITY

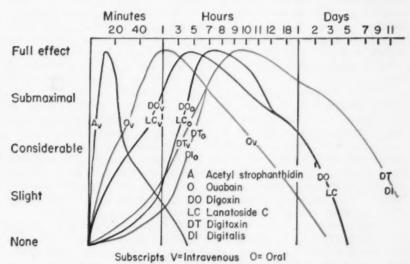
Digitalis preparations differ in the percentage of drug absorbed and in the rate of onset, cumulation, and duration of effect. Acetyl strophanthidin reaches greatest effect in less than twenty minutes and is fully accumulated in four hours. A dose of digitoxin, the slowest and most durable drug, is not fully effective for ten hours, and effects persist for eleven days (see illustration).

Though slow administration must occasionally be sacrificed in emergencies, toxicity is a hazard if medication is repeated before effects of the last dose are fully accumulated.

INDICATIONS FOR USE

The prime reason for digitalis therapy is congestive heart failure resulting from defective myocardial contraction, inefficiency of high ventricular rate, or both.

Treatment is generally useless or harmful if myocardial function is



Approximate curves of accumulation and decline of effects of single doses of cardioactive preparations in man

not disturbed, as in cardiac tamponade. Value is uncertain when failure is both mechanical and myocardial, for example, with valvular stenosis and dilatation. Digitalis may be ineffective even when only the myocardium is affected, especially with acute inflammatory and degenerative diseases like rheumatic fever, diphtheria, or typhus.

Chronic atrial fibrillation with fast ventricular rate is a classic indication; paroxysmal atrial fibrillation is far less responsive, but may be controlled. In atrial flutter, treatment is usually helpful, but large doses are frequently necessary.

Paroxysmal atrial tachycardia seldom requires such agents and may be induced by digitalis toxicity. Paroxysmal ventricular tachycardia always suggests digitalis intoxication; even if toxicity is not implicated, the drug should be employed only when other resources are exhausted.

Ventricular premature beats with failure may be relieved, as may sinus tachycardia if caused by failure.

Digitalis should be used for persistent complete heart block and failure but may be dangerous with partial or intermittent block.

If other measures do not prevent progressive failure with acute myocardial infarction, digitalis may be given cautiously. Digitalis is not effective against angina pectoris but may be administered if heart failure is concomitant.

Digitalis is not generally useful for disorders not primarily of cardiac origin unless the heart muscle is failing.

ADMINISTRATION

A suitable drug should be administered in amounts sufficient to produce the lowest level of digitalization that is effective. Dosage is adjusted to produce an optimum level and finally the best possible maintenance therapy.

Caution is needed with old age, debility, myxedema, electrolyte imbalance, severe lung disease, recent myocardial infarction, and active myocarditis, especially if digitalis has been taken previously. When the patient is transferred to a hospital or new physician, the former doctor should always be queried about earlier medication.

Digitalis and digitoxin are by far the most often employed. If slight congestive failure has developed slowly, 0.2 mg. of digitoxin may be given daily for two or three weeks.

For safe digitalization within a day or two, 0.4 mg. of digitoxin is given under close watch every six or eight hours for 3 doses, then smaller amounts are prescribed at the same or longer intervals until optimum effect or toxicity results.

With either schedule, digitalis in grams may be substituted for digi-

toxin in milligrams.

The daily maintenance dose of digitoxin is generally 0.15 mg. and ranges from 0.05 to 0.3 mg. Once established, amounts needed rarely fluctuate until the physical status changes.

Few people require or get the constant attention demanded with more rapidly acting preparations, and superiority over the slower types is slight at best. If the gravely

ill must be carried on the toxic borderline, brief action has some merit.

When a maintenance dose of digitalis or digitoxin seems inadequate, 1 or 2 small additions of Digoxin may be tried. Rapid, short action is also helpful in maintenance problems of paroxysmal atrial tachycardia, fibrillation, or flutter.

When demands are extreme, as in severe pulmonary edema with rapid atrial fibrillation, intravenous digitalization may save life. Lanatoside C or digoxin takes effect in a few minutes. Half the average intravenous digitalizing dose may be injected in five minutes; then, if necessary, half as much is given in each of 2 hourly doses. Further therapy is deferred for six hours.

Ouabain is even faster. After an initial dose of 0.5 mg., 0.1 mg. is administered each half hour for 2 doses, then hourly for not more than 3 doses. After the emergency, further digitalization proceeds more slowly and by mouth.

TOXICITY

Gastrointestinal upsets occurring an hour or two after oral therapy are merely irritative and not truly toxic, but other types are usually of central origin and significant. If digitalis is continued past the level of slight anorexia or nausea, slow pulse, or an occasional premature beat, dangerous reactions may occur and further benefits are unlikely.

Aged or debilitated patients may feel toxicity as general weakness, lassitude, insomnia, and irritability. Other manifestations of intolerance are yellow vision, headache, or neuralgia of the face and arms.

When slight reactions occur, the drug should be withdrawn for a day or two and resumed in slightly smaller doses. More severe effects will require longer withdrawal and greater reduction. Hazardous toxicity is commonly due to rapid digitalization in excessive amounts, to pronounced change in physical condition, or to neglect of slight warnings.

Severe vomiting or other extracardiac symptoms may seriously complicate heart failure. In such instances, digitalis is withheld at once, and any potassium deficiency from vomiting, diarrhea, or limited food intake is replenished. Otherwise, management is symptomatic.

Partial or complete relief should be noted in three or four days or, rarely, in a week or more. Slower progress suggests some other cause of adverse reactions than digitalis.

Cardiotoxicity may become manifest as progressive failure. Almost any rhythmic disorder may develop, the end-all being ventricular fibrillation. Sinus arrest or sinoatrial block is sometimes preceded by bradycardia. Atrial premature beats are less frequent than ventricular forms. If paroxysmal atrial tachycardia is mistaken for rapid fibrillation or impure flutter, further digitalization is sometimes undertaken, with fatal outcome. However, digitalis seldom causes bundle-branch block.

Grave toxic arrhythmias demand constant attention. The electrocardiograph should be left connected for frequent recording. Oxygen is administered; tourniquets, sedation, and *l*-norepinephrine are kept on hand.

Unless hyperkalemia is suspected, potassium is supplied intravenously. Potassium chloride, 3 gm. in 20 cc. of water, is diluted to 500 cc. in 5% glucose solution. Up to 6 gm. may be injected, not faster than 5 cc. per minute, until arrhythmia is controlled.

Though injection is preferred, potassium chloride or citrate may be taken orally, 4 gm. in cold fruit juice, then, if necessary, 2 gm. hourly for 2 doses.

The recommended amounts are not exceeded in the first six hours except for frank potassium depletion; later, more may be advisable. For ventricular paroxysmal tachycardia, procaine amide is recommended if potassium is not immediately available or is not effective in three hours. Orally, 3 standard capsules are given and may be followed by 250 mg. hourly for 2 additional doses.

When oral therapy is impractical, 50 mg. every two minutes is given by continuous intravenous drip up to 300 mg., then 50 mg. every four minutes to a total of 1,000 mg. in one hour.

The blood pressure is determined frequently, and if the level falls appreciably, infusion is retarded or stopped. If preinjection pressure is not quickly approached, *l*-norepinephrine is given.

ABO Blood Groups and Peptic Ulcer

C. A. CLARKE, M.D., DAVID LEWIS NORTHERN HOSPITAL, LIV-ERPOOL, AND ASSOCIATES find a much higher frequency of group O blood among patients with duodenal ulcer than among normal patients.

Distribution of ABO blood groups was investigated in 1,665 patients with gastric or duodenal ulcers and in a control group of patients without ulcers. The blood-type distribution of patients with ulcers did not contrast significantly with the control group. The frequency of group O blood was greater in patients with duodenal ulcers than in those with gastric ulcers. This supports the view that the conditions are separate diseases—a view that is also supported by differences in sex ratio, age incidence, precipitating factors, gastric acidity levels, clinical course, and probable independent inheritance.

ABO antigens may protect the gastroduodenal mucosa or modify the amount of hydrochloric acid secreted. With carcinoma of the stomach, diabetes in young people, and pernicious anemia—conditions associated with abnormal levels of gastric acidity—frequency of group A blood is high.

The relationship of the ABO blood groups to duodenal and gastric ulceration. Brit. M. J. 4940:643-646, 1955.

Spontaneous Pneumothorax Therapy

ALBERT G. MARRANGONI, M.D., CLIFFORD F. STOREY, M.D., AND PHILIP O. GEIB, M.D.

U.S. Naval Hospital, Portsmouth, Va.

Pleural symphysis by talc poudrage and underwater seal catheter suction allows immediate reexpansion of the lung and decreases the period of disability after spontaneous pneumothorax.*

Rupture of a subpleural bleb or a cyst is the most frequent cause of spontaneous pneumothorax. The visceral subpleural space is occupied by a layer of lung tissue consisting of potential spaces with the ability to increase into cystlike dilatations because of direct communication with the alveoli or the bronchioles. Cysts constitute potential sources of tension or valvular pneumothorax if distended or ruptured. Tuberculosis is an uncommon etiologic factor.

When thoracoscopic examination, intrapleural talc poudrage, and active catheter suction are employed for spontaneous pneumothorax, reexpansion is complete within several minutes and the patient is hospitalized for a few days only. Recurrences are rare after active therapy, and the dangers of conservative therapy such as captive lung, pleural effusion, and empyema are obviated.

After diagnosis of spontaneous pneumothorax, a trochar and can-

nula should be inserted into the pleural space under local anesthesia. As a rule, the second or third interspace in the anterior axillary line or the fourth or fifth interspace in the midaxillary line is used. The trochar is withdrawn, and the thoracoscope is then introduced through the cannula in order to examine the surface of the lung (see illustration).

Thoracoscopic study may be made quickly and easily with little equipment and is particularly valuable when blebs cannot be seen on the roentgenogram. Size of the lesions and the necessity for excisional surgery can be evaluated by the procedure.

After the thoracoscope is withdrawn, the visceral and parietal pleurae are thoroughly poudraged



Insertion of thoracoscope

The management of spontaneous pneumothorax. Am. Rev. Tuberc. 72:257-267, 1955.

with sterile talc insufflated by a power blower. A No. 16F red rubber catheter is placed through the cannula into the pleural space, the cannula is withdrawn, and active underwater-seal suction at a negative pressure of 15 to 20 cm. of water is begun. A posteroanterior chest film is made immediately and usually shows complete reexpansion.

Active suction is maintained for twenty-four hours, and simple underwater seal drainage is placed for an additional twenty-four hours. If the lung remains fully expanded and fluid does not collect, the catheter is removed. Intramuscular penicillin is administered while the intercostal catheter is in place.

At the time of discharge, patients exhibit sharp costophrenic angles and pleural reaction is usually not visible on the chest roentgenogram.

Open thoracotomy is necessary if large emphysematous blebs or bullae compress healthy lung tissue.

Treatment of spontaneous pneumothorax among 80 patients without neoplasm, tuberculosis, or trauma was analyzed. Among 55 patients treated conservatively, the average time required for reexpansion was thirty days and the average period of hospitalization was forty-three days. Recurrent collapse occurred in 12 instances.

Talc poudrage and underwaterseal catheter suction were employed for the remaining 25 patients. The average hospitalization time was three days, and no patient had a recurrence.

Hepatic Tests in Cirrhosis

LESLIE ZIEVE, PH.D., AND EARL HILL, M.D., VETERANS AD-MINISTRATION HOSPITAL AND UNIVERSITY OF MINNESOTA, MIN-NEAPOLIS, find that if independent functions of the liver are measured, 4 determinations are as accurate as a large group of tests in the diagnosis of cirrhosis.

A group of 100 normal persons were compared with 41 known cirrhotic patients. Total bilirubin, bromsulphalein retention (BSP), zinc and thymol turbidity, percentage of cholesterol esters, intravenous galactose tolerance and hippuric acid tests, and twenty-four-hour urine urobilinogen and coproporphyrin were measured simultaneously in each person.

BSP retention is the most reliable test for differentiating the normal from the cirrhotic patient. When zinc turbidity, hippuric acid, and urine coproporphyrin are combined with the BSP, discrimination between the two groups is increased significantly but not greatly. The other 5 tests contribute insignificantly to the distinction between normal and cirrhotic persons.

An evaluation of factors influencing the discriminative effectiveness of a group of liver function tests. Gastroenterology 28:785-802, 1955.

Phosphorus Insecticide Poisoning

GUSTAVE FREEMAN, M.D., AND CAPT. MARVIN A. EPSTEIN, M.C., U.S.A.

Army Chemical Center, Md.

Early and vigorous treatment generally reverses intoxication caused by a lethal dose of a phosphorus insecticide or nerve gas.**

Primary disease caused by the phosphorus insecticides, parathion and tetraethyl pyrophosphate, and nerve gases is due to acetylcholine poisoning; mechanism is selective cholinesterase inhibition. Since the skin is the most common route of entry, onset of symptoms of poisoning is usually insidious.

Nausea with later vomiting and, on occasion, abdominal cramps and diarrhea occur. Dizziness and, perhaps, headache may coincide with general weakness. Contact with skin exaggerates sweating, and local twitching and fasciculation may be evident.

Absorption through the eyes produces blurring and dimness of vision, and ciliary spasm causes constriction of the pupils and impairment of accommodation. Rhinorrhea, sensations of tightness or pressure in the chest and, occasionally, coughing are sometimes noted and are results of local effects on the mucous membranes.

Mental confusion, slurring of the speech, and disorientation may occur later, and the gait becomes clumsy and staggering. Random involuntary movements of the arms precede major convulsions. Breathing becomes rapid, shallow, and sometimes irregular.

Stupor and, finally, coma ensue. Secretions pour out of salivary, serous, and mucous glands of the mouth and respiratory tract. Froth wells up into the oropharynx and nasopharynx. Widespread rales and rhonchi are heard.

The skin and mucous membranes turn cyanotic as breathing becomes halting and finally stops. When asphyxia becomes intense, the blood pressure is elevated. Circulation is maintained for some time after apnea develops. Death results from anoxia and circulatory collapse.

Respiratory failure, the critical factor in survival, is caused mainly by intoxication of the respiratory centers and paralysis of the thoracic muscles and diaphragm. Mechanical obstruction to airflow is produced by viscid secretions. Peribronchial smooth muscle spasm, engorgement of the pulmonary circulation, and some edema of pulmonary tissue and alveoli also contribute to respiratory failure.

Atropine given promptly in quantities greater than 3 mg. within the

^{*}Therapeutic factors in survival after lethal cholinesterase inhibition by phosphorus insecticides. New England J. Med. 253:266-271, 1955.

MEDICINE

TREATMENT FOR PHOSPHORUS INSECTICIDE POISONING AND OUTCOME

Type of treatment	No. of patients	Survivors	
Atropine with artificial respiration or oxygen, early and adequate	10	10	
Palliative atropine; then delayed, adequate atro- pine and ventilation	7	7	
Atropine, early and adequate	3	3	
Atropine with artificial respiration or oxygen, late but vigorous	1	1	
Oxygen treatment mainly; token atropine	1	1	
Tracheotomy and manual artificial respiration	1	1	
Initially effective atropine; inadequate main- tenance	5	0	
Atropine or ventilatory treatment, late and in- adequate	8	0	
None	10	0	
Totals	46	23	

first five hours, while circulation is still efficient, and continued as necessary, blocks and reverses the toxic action of parathion. More prompt and vigorous therapy is required when tetraethyl pyrophosphate or nerve gas causes rapid poisoning.

Artificial respiration or oxygen must be administered. Mechanical clearing of the airways by repeated aspiration and, if necessary, by intubation of the larynx is essential. Tracheotomy may be necessary. Dehydration may necessitate parenteral fluid therapy, with careful

observation to avoid precipitation of pulmonary edema. Acute disturbances in acid-base and electrolyte balance may occur.

Treatment and outcome in terms of survival among 46 persons poisoned with lethal doses of insecticides are shown in the table. The toxic agent was parathion in 41 instances. All 5 patients poisoned by tetraethyl pyrophosphate died; 2 received initially effective atropine without adequate maintenance therapy, and treatment of 3 was late and inadequate.

¶ ACTIVE TUBERCULOSIS may appear after steroid therapy for nontuberculous diseases, such as arthritis, dermatitis, and asthma. Because cortisone, hydrocortisone, and ACTH are sometimes given to persons with unrecognized tuberculosis, W. H. Oatway, Jr., M.D., and George A. Paulsen, M.D., of Altadena, Calif., believe that roentgenograms of the chest should be made before treatment with corticosteroids is begun. If such therapy is necessary, antituberculous drugs should be given concomitantly to patients with familial tuberculosis or positive skin reactions.

Arizona Med. 12:275-277, 1955.

Allergic Reactions to Antibiotics

FRANCIS C. LOWELL, M.D. Boston University

The frequency and potential danger of reactions to sulfonamides and antibiotics make judicious use and observance of several precautionary measures essential in therapy.*

Exposure to antibiotics is becoming increasingly common with the widespread use of drugs in nosedrops, sprays, eyedrops, troches, chewing gum, and ointments. Poliomyelitis vaccine currently available contains penicillin. Sulfonamides and antibiotics are used in animal husbandry and may easily reach the table in various dairy products.

Allergic reaction to a drug presupposes contact approximately five days or more before onset of the reaction. Some factors, such as prolonged or repeated exposure, predispose to the development of allergic reactions. Although allergic reactions apparently are not quantitatively related to dosage, a large dose generally is more likely to induce sensitivity than a small dose. Parenteral administration of drugs is considerably more conducive to sensitization than oral administration.

The intramuscular injections of long-acting, slowly absorbed preparations cause the greatest number of reactions. Topical application is

also an important predisposing factor.

Reactions may not be more frequent in patients with atopic conditions, such as hay fever and eczema, than in the normal person but tend to be more severe and may include asthma, glottal edema, and vascular collapse.

Incidence of reactions to drugs is difficult to ascertain since minor reactions frequently are not reported. Any drug can give rise to virtually any type of reaction, but some reactions are produced much more frequently by some drugs than by others.

About 5% of patients receiving sulfonamides have reactions, usually fever and skin rashes. Topical application of sulfonamides may induce a high degree of allergy and is not advisable. These drugs cross react both immunologically and allergically. Gantrisin apparently produces the fewest reactions but, on the other hand, is the most recent drug.

The incidence of reactions to penicillin is approximately 1 to 10%. This agent probably causes more reactions than other agents combined, perhaps because of very wide use. The incidence of reactions is least with oral preparations, common with intramuscular crystalline penicillin, and perhaps great-

^{*}Allergic reactions to sulfonamide and antibiotic drugs. Ann. Int. Med. 43:333-344, 1955.

est with intramuscular procaine penicillin.

The relatively high incidence, about 10%, of reactions to streptomycin may be due to prolonged use in the treatment of tuberculosis. The most common reactions are fever, skin rash, and eosinophilia.

The incidence of reactions to the tetracyclines is approximately 1 to 2%. The drugs probably cross react in allergic patients. The chief side effects, mainly gastrointestinal, are probably not allergic in origin. Fever and skin rash are the most common manifestations of allergy.

Chloramphenicol has a low incidence of reactions but is not frequently used because of the possibility of aplastic anemia. The new antibiotics, such as Erythromycin and bacitracin, so far have produced very few allergic reactions.

Definitely allergic reactions associated with antibiotics include skin rash, urticaria and angioneurotic edema, serum disease syndrome, acute allergic shock or anaphylaxis, eosinophilia, exfoliative dermatitis, and asthma. Reactions that are probably allergic are fever, purpura. Henoch's and/or Schönlein's purpura, agranulocytosis, necrotizing angiitis, and migratory pulmonary infiltrations with eosinophilia. Reactions that are possibly allergic include leukopenia, anemia, nephritis or nephrosis, aplastic anemia, acute hemolytic anemia, hepatitis, and peripheral neuritis.

The skin reacts in a variable manner. Only in a few instances is the skin reaction specific for an individual substance. Sulfathiazole may cause a rash resembling erythema nodosum, but the lesions are usually smaller and more superficial than spontaneous lesions. Penicillin has a strong tendency to cause urticaria. Purpura, with or without thrombocytopenia but usually associated with capillary fragility, occurs most often after the administration of penicillin.

Prediction as to whether a patient with previous allergic reaction will react a second time if the same substance is readministered is impossible. The safest assumption is to expect a reaction, which usually is accelerated. Reaction may be accelerated even though previous administration did not cause allergy. Accelerated reactions may be fatal and usually include urticaria, angioneurotic edema, dyspnea with asthma, and vascular collapse.

An allergic reaction that occurs during treatment of infectious disease may be disguised. Fever, when all ancillary signs of infection have disappeared, may be allergic in origin and usually subsides in twentyfour to thirty-six hours after the agent is discontinued.

In general, skin tests have a very limited application in the diagnosis of allergic reactions associated with antibiotics. The most constant production of reactions to skin testing is seen in patients with penicillin allergy.

Treatment of allergic conditions depends on the manifestations and severity of reaction. Discontinuance of the drug and elimination by fluid administration usually suffice. However, acute and severe reactions require immediate measures. Epinephrine, 1:1,000 in a subcu-

taneous dose of 0.5 cc., is the most effective single measure and will maintain both the blood pressure and an adequate airway. Prompt intravenous administration of an antihistamine helps to allay allergic manifestations. Antihistamine also acts synergistically with epinephrine to maintain blood pressure.

Steroid therapy is not effective for acute reactions but affords good relief of other allergic manifestations and is given when discomfort or disability is severe or progressive.

Since the initial injection in a course of therapy is most likely to cause an acute reaction, injection should be given into an extremity rather than the buttocks so that absorption can be delayed. If reaction occurs, a tourniquet is placed proximal to the site of injection, ice or a cold object is placed on the site, and 0.1 or 0.2 cc. of 1:1,000 epinephrine is injected into the site.

¶ SODIUM RETENTION AND EDEMA may result from percutaneous absorption of fludrocortisone acetate when the steroid is applied topically, especially in a lotion, in the treatment of dermatitis. The factors which influence the amount of systemic dissemination are the concentration of the drug, the frequency of application, and the stage of the lesions. Though the reaction diminishes as the dermatitis clears, Thomas B. Fitzpatrick, M.D., Herbert C. Griswold, M.D., and John H. Hicks, M.D., of the University of Oregon, Portland, warn that the transitory retention and hypervolemia may be dangerous to patients with incipient congestive heart failure, toxemia of pregnancy, essential hypertension, or nephritis.

J.A.M.A. 158:1149-1152, 1955.

POSTHERPETIC NEURALGIA may be completely or partially relieved by injection of 2% procaine into the trigger spots after sympathetic block of the appropriate ganglia has failed. The patient is given a barbiturate, and the trigger points are carefully located and marked with a ball pen, reports Frederick Leet Reichert, M.D., of Stanford University, San Francisco. A 25-gauge, short-bevel needle is introduced, and deposition of the drug is begun just under the skin and made gradually deeper until all areas have been reached. Patients who bruise easily are given 10 mg. of vitamin K subcutaneously before injection, as hematoma at the injection site vitiates success of the treatment. Of 22 patients treated, neuralgia was permanently relieved in 13 and greatly benefited in 4. Permanent relief may be obtained in many instances of chest involvement by a single injection.

Stanford M. Bull. 13:357-360, 1955.

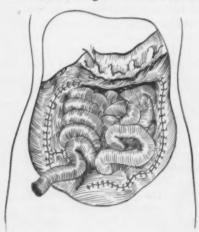
Surgery for Ulcerative Colitis

WILLIAM F. NICKEL, JR., M.D. Cornell University, New York City

Ileostomy and, sometimes, proctectomy should be combined with total colectomy when surgery is necessary for ulcerative colitis.*

About one-fifth of patients with ulcerative colitis require surgery. Reasons for operation are failure of medical therapy, massive uncontrollable hemorrhage, multiple fistulas or perianal sinuses, obstruction, perforation, recurrent polyarthritis, and carcinoma of the colon or rectum.

Spontaneous healing is unusual after a rectovaginal fistula forms.



Ileostomy combined with removal of the

The vaginal portion of the lesion may persist as a perineovaginal fistula after proctectomy and necessitate another operation. Internal fistulas also heal poorly without surgery.

Mortality is lower when ileostomy and colectomy are done together, with or without proctectomy (see illustration), than when only ileostomy is performed initially. The combined procedure eliminates at least one operation, shortens the hospital stay, and reduces the economic burden. Complications associated with multiple-stage procedures, such as recurrent thrombophlebitis, anemia, and homologous serum jaundice, are avoided.

Proctectomy should be included in the initial stage when surgery is elective. When hemorrhage, perforation, or other acute condition necessitates immediate operation, only colectomy with ileostomy is performed. Young adult males are allowed to choose between possible occurrence of cancer if proctectomy is not done and possible disturbance of sexual function if the rectum is removed.

Before puberty, ileostomy alone is the preferred operation. A number of children may eventually have intestinal continuity restored.

Over a five-year period, 24 pa-

*Combined operative procedures for ulcerative colitis. Surg., Gynec. & Obst. 101:353-358, 1955.

tients had the combined operation; in 8 instances, proctectomy was done initially, and 16 patients had only ileostomy and colectomy at the first stage. Rectums of 9 of the patients have not yet been removed.

A single patient died of acute leukemia, another is convalescing from recent surgery, and 22 have returned to full activity. Revision of ileostomy because of dysfunction of the stoma was necessary in 8 instances, and 2 patients have ileostomy prolapses. No spread of disease into the small bowel has occurred.

Some of the individuals are doing heavy manual labor. Though no woman of the group has borne a child, no difficulty with pregnancy is anticipated. Several of the men have impregnated their wives.

Of 6 patients with perforation of the colon, 3 treated with drainage alone died but 2 who had combined surgery recovered. Ileostomy and drainage of the abscess was sufficient for 1 person with a perforation localized in the lower left quadrant. Colectomy with ileostomy is preferred if the interval between perforation and operation is short.

When carcinoma occurs with ulcerative colitis, five-year survival is rare.

Pathogenesis, Treatment of Acquired Megacolon

ARRIGO RAIA, M.D., SAO PAULO MEDICAL SCHOOL AND HOSPITAL DAS CLINICAS SAO PAULO, SAO PAULO, BRAZIL, after a study of 205 cases, concludes that vitamin deficiency is the most plausible cause of acquired megacolon in his country.

Megacolon is a progressive disease of the autonomic nervous system involving the whole body and is denoted by intestinal stasis, hypertrophy, and dilatation and elongation of one or more portions of the large bowel, usually the sigmoid. Degeneration of the myenteric plexuses which coordinate the peristaltic movements results in peristaltic asynchronism. Lesions of the plexuses are found throughout the colon but are most common in the distal 10 to 20 cm. of the rectum. Similar lesions have been found in the esophagus, stomach, duodenum, ileum, ureters, and heart.

Chronic vitamin B_1 deficiency is probably responsible for the initial plexus destruction. Animals fed a diet deficient in vitamin B_1 and men with beri-beri show pathologic changes similar to those of megacolon.

The best surgical treatment is a 2- or 3-stage rectosigmoidectomy with a temporary transverse colostomy. Of 59 patients so treated, 1 died; the rest were discharged in good condition. After surgery, a vitamin-rich diet prevents recurrence.

Pathogenesis and treatment of acquired megacolon. Surg., Gynec. & Obst. 101:69-79, 1955.

Carcinoma of the Stomach

FREDERICK FITZHERBERT BOYCE, M.D. Tulane University, New Orleans

Exploration should be done in goodrisk patients suspected of having carcinoma of the stomach, and, if cancer is found, resection is performed immediately.*

THE mortality from cancer of the stomach is overwhelmingly non-surgical. The reason for this is that less than half of the patients who have surgery are operated upon when gastrectomy, even for palliative purposes, is still feasible. Part of the delay is caused by the patient and part by the medical profession.

Because carcinoma of the stomach occurs most frequently in middle-aged and older individuals, the manifestations of the disease may be overshadowed by symptoms attributable to age and chronic disorders.

Early symptoms are important in the aggregate and eventually but are insignificant and misleading individually. Digestive distress may not occur until the lesion is far advanced and may be no more characteristic of carcinoma than of other diseases with gastric manifestations. Unfortunately, curable cancer of the stomach has no typical pattern and the classical symptoms are the terminal ones.

Gastric analysis is not a reliable or very helpful diagnostic test. When hypoacidity or anacidity occurs, gastric carcinoma is a possibility, but the diagnosis cannot be excluded by either normal levels or high acidity. A positive gastroscopic study is useful, but a negative report is not reliable, since the neoplasm may be in an area which cannot be visualized. A positive biopsy is conclusive proof of cancer, but a negative biopsy does not differentiate between ulcer and cancer, no matter how well the lesion is visualized. If cytologic examination of the gastric secretion is positive, exploration should be done immediately.

Next to a well-taken and carefully interpreted history, roentgenologic examination is the most useful diagnostic method. However, a decision as to operability of a growth should never be made only on the basis of roentgenologic findings. Carcinoma of the stomach and gastric ulcer cannot be differentiated by roentgenographic study. An apparently healing ulcer may be a crater filled with malignant cells. The risk of surgery for gastric ulcer is 2%, whereas the risk for gastric malignant disease is about 10%.

Gastric polyps should be prompt-

^{*}The nonsurgical mortality of carcinoma of the stomach. Am. J. Gastroenterol. 24:36-52, 1955.

ly removed; benign growths cannot be radiologically distinguished from malignant ones.

Exploratory laparotomy should be done for patients suspected of having carcinoma of the stomach. If diagnosis seems clear on the basis of previous disease and roentgenograms, confirmation by gastric analyses and cytologic and gastroscopic studies is not necessary. Total gastrectomy should be reserved for patients in whom the choice lies between total removal of the stomach and no surgery at all. Since the operation involves subsequent dietary care and compensatory therapy, the patient should be informed of the alternatives as well as of the implications of the operation. The end results of partial gastrectomy are better.

¶ ACUTE OR CHRONIC RECURRENT APPENDICITIS may be caused in some instances by Endamoeba histolytica. Mark M. Schapiro, M.D., of Casa de Salud el Carmen, Tegucigalpa, Honduras, reports that appendicitis occurred in 30 patients who had amebic dysentery. Of 8 other appendicitis patients, 6 had had amebic infection within five years previously. Antiamebic medication before and after appendectomy is necessary when infestation is evident.

Arch. Surg. 71:185-190, 1955.

¶ INTESTINAL OBSTRUCTION due to inflammatory strictures may result from unrecognized regional enteritis or diverticulitis. Earl G. Yonehiro, M.D., Grafton A. Smith, M.D., and John F. Perry, Jr., M.D., of the University of Minnesota, Minneapolis, report that each disease was responsible for nearly one-third of 45 patients with bowel obstruction. Primary resection is done after distention is controlled, but immediate transverse colostomy with complete deviation of the fecal stream is performed for patients with dilatation of the greater length of the colon.

Minnesota Med. 38:481-483, 500, 1955.

¶ CONTAMINATED OPERATIVE INCISIONS may be closed immediately without danger of subsequent infection if the inflammatory area is treated with streptokinase (SK) and streptodornase (SD). Seth W. Smith, M.D., of the University of California Medical Center, Los Angeles, instills 10,000 units of SK and 2,500 units of SD per cubic milliliter once daily for periods of four to six hours. Improved drainage attributable to the liquefying and irritative properties of the substances was probably an important factor in rapid healing in 73 patients.

Surg., Gynec. & Obst. 101:173-184, 1955.

Acute Large Bowel Obstruction

ALEX W. ULIN, M.D., PAUL J. GROTZINGER, M.D., WILLIAM C. SHOEMAKER, M.D., AND WILLIAM L. MARTIN, M.D. Hahnemann Medical College and Hospital, Philadelphia

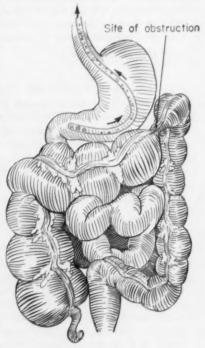
Most patients with acute large bowel obstruction caused by carcinoma require surgical decompression.*

Even when the best of conservative treatment is given for obstruction of the large bowel, emergency surgery may be necessary. Often, however, a carefully calculated delay, utilized to prepare the patient for surgery, is advisable and will not compromise the surgical treatment.

About 20% of cases of carcinoma of the colon are acutely obstructed on admission to the hospital. Death in the obstructed group is usually the result of associated medical disorders such as cardiovascular renal disease, embolization, and general infirmity rather than surgery. In addition, the colon often has other disease processes such as multiple carcinomas, diverticulitis, volvulus, and fecal impaction. The greatest problem in this group is salvaging patients for later definitive treatment of the carcinoma.

The principal deleterious element in large bowel obstruction is the tension built up within the closed colonic loop by continuous ileal emptying of swallowed air into the right colon. If the tension reaches high levels, the cecum perforates.

When cecal rupture is imminent, immediate surgical decompression of the large bowel is mandatory. However, tube suction, which interrupts the passage of swallowed



Tube suction

^{*}Emergency management of acute large bowel obstruction due to carcinoma of the colon, Am. Surgeon 21:687-692, 1955.

air through the small intestine into the colon, will halt the mounting colonic tension (see illustration). Even though such suction is usually ineffective in actually decompressing the distended colon, prevention of increased distention allows some delay in the cases of obstruction that are associated with medical conditions.

Cancer alone seldom completely obstructs the colon. The usual acute episode is brought on by inflammation, edema, swallowed fruit pits, hemorrhage, or infarction. Once the colon is decompressed, the complete block often regresses. Conservative therapy will relieve the condition in about 10% of cases.

The usual patient with carcinomatous obstruction of the colon is old and has other disease. Although most persons require surgical intervention, almost all benefit from

a twelve- to twenty-four-hour diagnostic and therapeutic program of tube suction, antibiotics, antispasmodics, parenteral fluids, electrolytes, blood, and carefully administered warm saline and soda bicarbonate enemas. Electrocardiograms, chest roentgenograms, scout films of the abdomen, and sigmoidoscopic examination should be made. In some instances, barium enema may be advisable. Medical consultation in regard to associated cardiopulmonary disease should be obtained.

A strangulated cecum requires early surgery, but a decision for colostomy in other cases may be made later during the first twenty-four-hour period. For lesions of the cecum and right colon, primary resection and anastomosis may be performed after as little as twelve hours of adequate preparation.

Prophylactic Resection for Diverticulitis

EDWARD S. JUDD, JR., M.D., MAYO CLINIC, ROCHESTER, MINN., recommends one-stage prophylactic resection for recurrent sigmoidal diverticulitis. The operation is done during a period when the disease is not inflammatory. The procedure is especially advisable for patients contemplating travel in remote areas and for individuals who have had urinary bladder symptoms during a previous attack of diverticulitis.

Single-stage resection is less time consuming and less expensive than conservative treatment. Repeated hospitalization is not necessary, and the disease does not recur.

Patients with abdominal masses, partial colonic obstruction, previous hemorrhage, or vesicosigmoidal fistula may be successfully treated by the one-stage procedure. In a group of 68 patients, post-operative complications were few and minor. Death from hemorrhage of an incidental duodenal ulcer occurred in 1 instance.

Prophylactic resection for recurrent sigmoidal diverticulitis. Surg., Gynec. & Obst. 101:105-106, 1955.

Mitral Stenosis and Valvuloplasty

LAURENCE B. ELLIS, M.D., AND DWIGHT E. HARKEN, M.D. Harvard University, Boston

Well-selected patients with rheumatic mitral stenosis can expect significant and persistent improvement after surgery.*

Surgical treatment for mitral stenosis is palliative rather than curative, and patients without significant symptoms should not have valvuloplasty. The valve is not restored to normal by the operation, and other factors contributing to heart disease are not relieved. For the patient whose condition is progressively deteriorating with medical management, however, the procedure may be lifesaving.

The following classification is recommended:

• Group I—Patients with no significant symptoms

 Group II—Patients handicapped by symptoms that are not particularly progressive

 Group III—Patients with pulmonary symptoms that limit ordinary activities significantly and progressively

 Group IV—Patients with chronic congestive failure who are invalids.

Patients in groups I and II are usually best managed medically. The greatest benefit can be expected in group III patients. Those in group IV can also expect improve-

ment, although the operative mortality rate is higher than in the other groups.

Of 500 patients having valvuloplasty, only 13 were in group II, while 342 were in group III and 145 in group IV. With increasing experience, the mortality rate has dropped from 14% to 2.7% in groups II and III but remains at 27% for group IV, possibly because better preoperative medical care now brings many group IV patients to surgery who formerly succumbed before operation. Advancing age does not increase the risk of surgery as long as the distinction between groups III and IV is maintained. Auricular fibrillation does augment the hazard, largely because of increased embolic phenomena. When embolization from the heart occurs in a patient with normal sinus rhythm, a loosened fragment of calcified valve is usually the source.

Prophylaxis of embolization by temporarily angulating the innominate, carotid, and left subclavian arteries with tapes for periods of sixty seconds during manipulation in the left atrium has not been successful and the anoxia thus produced may be harmful. However, all patients with auricular fibrillation should have the auricle freely

^{*}The clinical results in the first five hundred patients with mitral stenosis undergoing valvuloplasty. Circulation 11:637-646, 1955.

flushed before any intraauricular manipulation.

Late embolic phenomena are eliminated by mitral valvuloplasty to such an extent that the frequent occurrence of embolization alone is an indication for surgery. Since approximately 25% of patients with auricular fibrillation who have had previous peripheral embolic episodes have further emboli at surgery, the operation is more hazardous for such patients, but once the operation is successfully accomplished, future emboli are unlikely.

A postoperative syndrome, which may be recurrent after initial convalescence, is noted in about 30% of patients. Chest pain may be of a boring nature over the precordium, pleuritic, or similar to an intercostal neuralgia and is often coupled with fever. Pneumonitis

and pleural effusion are commonly associated. Congestive symptoms may also develop. Since the left ventricle is sheltered before surgery, the additional work caused by the alteration in hemodynamics after a valvuloplasty is sufficient reason for slight temporary left heart failure. None of the postoperative syndromes can be correlated with age, sex, severity of the previous underlying heart disease, or active rheumatic carditis.

Since the improvement after surgery is generally sustained, the fracture of the valve is assumed to be permanent. When regression occurs after an initial improvement, other factors such as associated aortic valvular disease, inadequate operative fracture or mere dilatation, significant concomitant mitral insufficiency, or recurrent rheumatic fever can often be incriminated.

Subcarinal Mediastinal Granulomas

JOSEPH J. GARAMELLA, M.D., FRANCIS L. STUTZMAN, M.D., RICHARD L. VARCO, M.D., AND NATHAN K. JENSEN, M.D., VETERANS ADMINISTRATION HOSPITAL AND UNIVERSITY OF MINNESOTA HOSPITALS, MINNEAPOLIS, report that mediastinal granulomas should be considered in the differential diagnosis of indeterminate mediastinal lesions.

Cause of mediastinal granulomas is not definitely known, but tuberculosis is probably an etiologic factor. However, the designation tuberculoma is reserved for those lesions in which acid-fast organisms are found.

Tracheal and bronchial obstruction or occlusion of the venous return from the lungs may occur if the lesion is not treated. Surgery is advised if symptoms develop or cancer is suspected. Streptomycin and para-aminosalicylic acid may be administered postoperatively.

Subcarinal mediastinal granulomas causing esophageal obstruction. J. Thoracic Surg. 30:187-201, 1955.

Surgery for Diseases of the Spleen

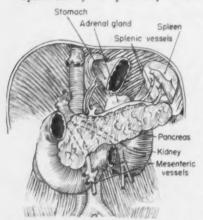
WARREN H. COLE, M.D., JAMES D. MAJARAKIS, M.D., AND LOUIS R. LIMARZI, M.D.

University of Illinois and Illinois Research Hospitals, Chicago

Removal of the spleen is of value jor hemolytic disorders, hemorrhagic diseases associated with thrombocytopenia, hypersplenic states associated with splenomegaly, and some miscellaneous conditions.*

Hypersplenism denotes an abnormal splenic activity with resultant reduction of one or more of the blood cellular elements, that is, thrombocytes, neutrophils, and erythrocytes. The explanation of the mechanisms causing the hematopoietic effects of hypersplenism is still conjectural.

Splenectomy is probably most



The spleen in relation to surrounding anatomic structures

*Surgical aspects of splenic disease. Arch. Surg. 71:33-46, 1955.

beneficial for hemolytic anemia. Spherocytic anemia is the most common and important disease of hereditary hemolytic the dromes. Diagnosis is suggested by previous jaundice and slight splenomegaly and anemia. Microspherocytes in the blood, increased osmotic and mechanical red cell fragility, reticulocytosis, and increased urobilinogenuria are usually found. Gallstones and leg ulcers are frequently noted, and, with severe disease, weakness, lassitude, and hemolytic crises occur.

Splenectomy is sometimes beneficial for other types of hereditary anemia, such as Mediterranean anemia, sickle-cell anemia, ovalocytosis, and congenital porphyria, when a hypersplenic state is associated.

Acquired hemolytic anemia results from extracorpuscular mechanisms and may be idiopathic or secondary to malignant disease, chemicals, burns, or x-rays. The destroyed red cells usually have normal fragility.

With the idiopathic type, autoantibodies of the agglutinin or hemolysin type are found. Coombs' test allows differentiation of this anemia from hereditary spherocytic anemia. Symptoms are similar to those of spherocytic anemia but occur later in life and are more severe. Spherocytosis and splenomegaly are noted in about one-half of patients. Results of splenectomy are good in about one-half to two-thirds of patients. Surgery is advisable if ACTH or cortisone with repeated blood transfusions fails to produce a satisfactory remission. Recovery is occasionally spontaneous.

With almost all types of hemolytic anemia, a crisis may occur. Blood transfusion is carefully started and discontinued if reaction develops. Corticotropin and cortisone are beneficial for acquired disease. Some observers favor immediate

splenectomy.

Thrombocytopenic purpura is characterized by excessive bleeding from mucous membranes and body orifices and hemorrhage into the skin, subcutaneous tissue, and various organs. A defect in clotting or increased permeability of the capillary walls or both are seen. Blood platelets are reduced, and no clot retraction is noted. Megakaryocytes are increased in the bone marrow. Weakness and weight loss are noted, but splenomegaly is rare.

ACTH and cortisone may produce a temporary remission in the idiopathic form. Splenectomy is done after a rise in platelet count sufficient to prevent excessive bleeding. Results are good in about 80% of patients.

Secondary purpura may be due to drugs, leukemia, Gaucher's disease, infection, sarcoid disease of the spleen, food allergy, extensive burns, or x-ray therapy. Results from splenectomy are good in about one-half of patients. In children, since recovery is usually spontaneous, splenectomy is performed only for chronic recurrent purpura and uncontrollable bleeding.

Primary hypersplenic states include splenic neutropenia and pancytopenia. Fever and pain in the splenic area are sometimes noted. Susceptibility to infection is often increased. Only one of the cellular elements of the blood is involved.

Splenectomy is curative.

Banti's disease, Felty's syndrome, and Gaucher's disease produce hypersplenism of the secondary type. With Banti's disease, a large fibrotic spleen, anemia, leukopenia, portal hypertension, esophageal varices, and, later, jaundice and ascites are noted. Compression with a Patton tube or resection of the gastric cardia controls hemorrhage from the varices. Since results from splenectomy alone are poor in most instances, some type of portacaval or splenorenal shunt is often done. However, the mortality rate is high and long-term results are uncertain with this procedure.

Felty's syndrome is comprised of chronic rheumatoid arthritis, splenomegaly, anemia, and leukopenia, with occasional lymphadenopathy and brownish skin pigmentation. Results from splenectomy are gratifying, although the arthritis is un-

affected.

With Gaucher's disease, splenomegaly, anemia, skin pigmentation, and large lipoid deposits in the spleen, lymph nodes, and bone marrow are found. Splenectomy is done if pancytopenia develops or if the large spleen is uncomfortable or in danger of rupture.

Although splenectomy is usually not done for *hypoplastic anemia*, some patients are benefited and require fewer blood transfusions.

Miscellaneous conditions benefited by splenectomy include splenic cysts, tumors, and infarcts and splenic artery aneurysms. Results are good after removal of the spleen in patients with porphyria. Splenectomy is advised for sarcoidosis and myeloid metaplasia of the spleen

associated with bone marrow myelosclerosis if hypersplenism is produced. Splenectomy is also performed for numerous diseases with splenomegaly when hypersplenism with panhematopenia develops.

The spleen should not be removed in patients with agnogenic myeloid metaplasia, Hodgkin's disease, polycythemia, pernicious anemia, or leukemia. Splenomegaly usually accompanies subacute bacterial endocarditis, but the spleen is not removed unless massive infarct due to embolus develops.

Delayed Rupture of the Spleen

C. THOMAS FULTZ, M.D., AND WILLIAM A. ALTEMEIER, M.D., UNIVERSITY OF CINCINNATI, report that delayed splenic rupture may occur in any patient after direct or indirect trauma of the lower chest, upper abdomen, or left back. The criteria for a diagnosis of delayed splenic rupture are [1] a latent period of forty-eight hours or more after injury and [2] sudden onset of all the signs and symptoms of intraperitoneal hemorrhage. Length of the latent period is dependent on the rapidity with which the subcapsular hematoma forms and ruptures. The condition may be mistaken for appendicitis, ectopic pregnancy, cholecystitis, perforated ulcer, pneumonia, pancreatitis, rib fractures, or pulmonary embolism.

Blunt trauma is usually responsible for the condition, and approximately 40% of the instances are associated with fractures of the ribs.

Symptoms include referred pain in the left shoulder, tenderness in the left upper quadrant of the abdomen, shifting dullness, and shock. Roentgenographic study may reveal medial or anterior displacement of the stomach with irregularity of the greater curvature and downward displacement of the splenic flexure. Ingestion of a small amount of thin barium and examination with the patient in the Trendelenburg position may aid diagnosis. Abdominal paracentesis is of little value.

Splenectomy is performed when diagnosis has been made. All of 15 patients with delayed splenic rupture recovered after accurate diagnosis and prompt treatment.

Delayed rupture of the spleen after trauma. Surgery 38:414-422, 1955.

Management of Lymphedema

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Elevation, compression, massage, and dehydration may reduce lymphedema, especially of the arms.*

Obstruction of the lymphatic flow with subsequent edema may be primary and idiopathic or result from destruction of lymph channels. Surgical removal or neoplastic invasion of lymph nodes or lymphadenitis after radiotherapy, pyogenic infection, or granuloma may impair drainage channels. Edema of the legs may be caused by prolonged sitting when \$\frac{1}{2}\$ girdle constricts the groin or a chair edge presses on the thighs.

Fluid accumulates in tissue spaces, and connective tissue proliferation converts the boggy area into a fibrotic mass.

Edematous extremities are not only unsightly and a constant source of discomfort but also are susceptible to cellulitis and erysipelas.

Lymphedema of the arms is most commonly seen as a sequela to radical mastectomy. Onset may be shortly after surgery or as long as five years after operation. Swelling generally occurs in the hand first and progresses proximally. The increased weight causes neuralgia.

Treatment for swollen leg is generally for lymphedema praecox, a lesion of unknown etiology that

usually occurs among young women. Onset is most frequently shortly after the onset of the menses but may be as late as at 40 years of age.

At first, slight puffiness is noted in a foot and ankle. Edema, which develops during the day and regresses at night, spreads up the leg, sometimes to the buttock. Several years may elapse before the other leg is affected.

Prolonged elevation of an extremity reduces venous pressure and increases speed of lymph flow. A foot may be raised 6 to 8 in. Elevation of the arms is best accomplished by suspension with a traction and counterweight arrangement. Since constricting bandages act as tourniquets under tension, foam-rubber pads are applied to the arm by an elastic bandage. Friction of the foam rubber against the skin secures the arm in place.

Before a limb is elevated, arterial circulation must be evaluated. If radial or pedal pulse can be detected and elevation does not produce pallor, arterial flow is good. The radial pulse should be palpated when the arm is extended.

Compression of the extremity when the patient is ambulatory prevents reaccumulation of fluid drained during elevation. Elastic stockings should be made to meas-

^{*}The treatment of lymphedema. Surg., Gynec. & Obst. 101:25-34, 1955.

ure. Pressure at the foot should be 40 mm. of mercury and should decrease proximally. Stockings generally end below the knee but must extend nearly to the groin when edema of the thigh occurs. Orlon stockings do not buckle at the knee and, therefore, do not constrict the popliteal space.

Elastic sleeves should give 40 mm. of mercury pressure at the base of the fingers and 15 mm. at the proximal end in the upper one-

third of the arm.

When the limbs are supported with elastic stockings, full activity is encouraged. Massage in the direction of lymph flow may be taught to the patient so that daily treatments can be self-administered. During the first week of hospitalization, a 2-gm. salt diet and daily injections of 1 to 2 cc. of Thiomerin are prescribed.

Long, nonabsorbable sutures placed in the subcutaneous tissues extending from the normal tissue area to the edematous areas or repeated injections of hyaluronidase in doses as high as 1,500 turbidity reducing units do not further reduce edema.

Suction Drainage for Postoperative Wounds

CAPT. RICHARD S. SILVIS, CAPT. LEO E. POTTER, LT. CMDR. DONALD W. ROBINSON, AND LT. WILLIAM F. HUGHES, M.C., U.S. NAVAL HOSPITAL, OAKLAND, CALIF., recommend the use of continuous-suction, negative-pressure drainage instead of pressure dressings for postoperative wound drainage. The procedure is useful after radical mastectomy and even more advantageous after resection of the mandible or radical neck or groin dissection.

Several holes are cut in the distal 5 cm. of a catheter, and this portion is inserted into the subcutaneous space. After the catheter is sutured to the skin, the wound is closed firmly with interrupted sutures. Suction through the catheter is then begun. Gentle manual pressure, if necessary, expresses air and serum. Light dressings are applied after skin flaps are sucked tight against underlying tissues. The wound is examined periodically during the first twenty-four hours. Movement of the catheter without removal is occasionally necessary to provide adequate drainage. The catheter is removed after sixty to seventy-two hours. The total volume of drainage varies from 100 to 350 cc. Pressure dressings may be used with continuous suction if desired.

Continuous suction makes change of dressings unnecessary. Since subcutaneous serum collection is prevented, development of thoracocutaneous blood vessels is facilitated. The procedure does not prevent successful skin grafting.

The use of continuous suction negative pressure instead of pressure dressing. Ann. Surg. 142:252-256, 1955.



Gout and Probenecid

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and

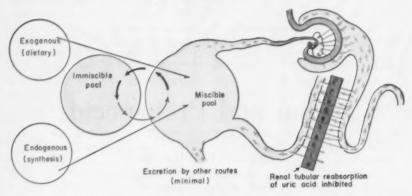
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Norristown State Hospital, Norristown, Pa.

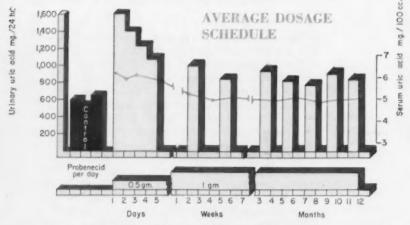
• The miscible pool of uric acid—that which is in solution and capable of reacting chemically—is approximately 1,200 mg. in normal individuals. Patients with gout may have 3 to 15 times as much, and this excess is finally deposited in the tissues as tophi. the so-called immiscible pool. Restricted diets cannot control the elevation of serum uric acid, and no method has been found to decrease the synthesis of urates. A practical approach, however, is the use of uricosuric agents to increase the excretion of uric acid. Probenecid (Benemid) is the most successful and least toxic of these agents. The regimen is not complicated, and severe dietary restrictions are unnecessary.

A Modern Medicine Exhibit adapted from 1 of the 150 selected at the annual convention in Atlantic City, June 6 to 10, 1955, for reproduction in A.M.A. Scientific Exhibits—1955, Grune & Stratton, New York City.

Effect of Probenecid on Uric Acid Pool



Usually, about 90% of uric acid filtered from the blood stream is reabsorbed by the renal tubules. Probenecid reduces this reabsorption to approximately 80% and greatly increases excretion of uric acid.



A.M., a 55-year-old male who had gout for eight years, illustrates the effect of the dosage schedule recommended for most patients. He had nontophaceous gout, indicating minimal amounts of urates deposited in the tissues. A decrease in urinary uric acid excretion during a year of treatment was not

due to ineffectiveness of probenecid but rather to the gradual reduction of the miscible pool. Food given with the drug probably increases tolerance. Sodium bicarbonate, sufficient to maintain urine alkalinity, plus a daily fluid intake of 1,500 cc. or more reduces the hazard of urate gravel or stones.

ATYPICAL PROBENECID REQUIREMENTS

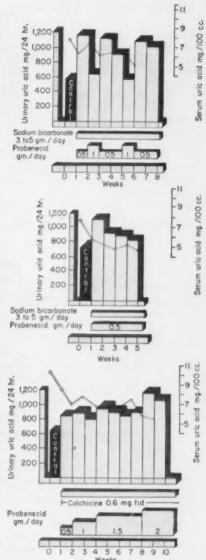
D.S., a 64-year-old male, exhibited limited tolerance to therapy. He was able to tolerate 0.5 gm. of probenecid a day with good uricosuric effect. When the dosage was increased to 1 gm., however, gastrointestinal symptoms developed and the drug, although technically administered, was vomited before pharmacologic effects could be exerted.



E.G., a 58-year-old man, had very definite renal tubular impairment before therapy was begun. Only 0.5 gm. a day of probenecid was effective. Preexisting renal tubular impairment reduces the required probenecid dosage.

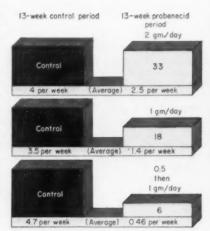


W.R., a 44-year-old male, had chronic tophaceous gout. Dosages of 0.5, 1, and 1.5 gm. did not produce the expected reduction in serum uric acid level. After eight weeks of unsatisfactory treatment, another increase to 2 gm. of probenecid a day increased urinary excretion of uric acid and lowered serum uric acid level within twenty-four hours. Colchicine was also given to relieve discomfort and to prevent acute attacks during the early stages of therapy.

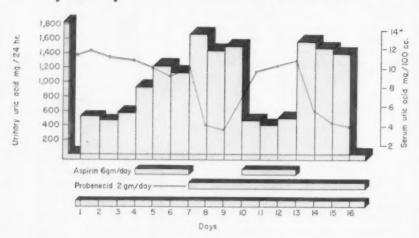


Acute Attacks during Probenecid Therapy

Probenecid has been reported to precipitate acute attacks during the early weeks of therapy. To determine the effect of dosage on this phenomenon, 3 groups of 10 patients each were studied. Results are shown on the chart. The increased mobilization of urates with effective doses of probenecid may constitute a chemical stress which may precipitate an attack of gout in the same manner as surgery, exposure, or dietary excess.



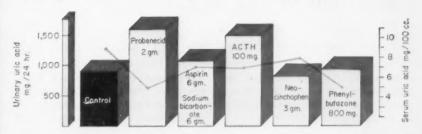
Acetylsalicylic Acid and Probenecid



M.R., a 50-year-old man who had gout for nine years, is an example of the fallacy that 2 uricosuric agents produce a better effect than 1 alone. Acetylsalicylic acid (aspirin) and probenecid each increased urate excretion when given sep-

arately, but the effect of both was completely negated when the drugs were given concomitantly in the same doses. Analgesics other than the salicylates should be given to relieve pain during probenecid therapy.

Comparison of Uricosuric Agents



R.M., a 52-year-old male with gout for twelve years, was given a oneday test with each of 5 agents, with an interval of one week between each test. The choice appears to lie among probenecid, ACTH, and phenylbutazone. ACTH requires a

daily intramuscular injection, thus reducing the self-sufficiency of gouty patients. Toxicity of phenylbutazone is high. Probenecid produces only a few toxic symptoms, which usually can be controlled by reducing the dosage.

Dietary Restrictions

- · Uricosuria with probenecid permits a relatively normal diet.
- A restricted diet is continued during the first month of therapy, then is liberalized.
- Only high purine food interdictions are continued.
- Low-fat, high-carbohydrate diet is recommended.
- o Overindulgence is discouraged to prevent weight gain.
- Fluid intake should be liberal.
- * Alcoholic beverages in moderation are usually well tolerated.

Summary

Probenecid does:	1. have a pronounced uricosuric effect 2. decrease serum uric acid 3. decrease the miscible pool of uric acid 4. stop or decrease acute attacks in most instances 5. have a wide margin of safety 6. return many invalids to gainful occupation
Probenecid does not:	1. act as an analgesic during an acute attack 2. cure an acute attack 3. alter uric acid metabolism, the gouty defect

Indiscriminate Use of Hormones

JAMES HENRY FERGUSON, M.D. Tulane University, New Orleans

Endocrine therapy in obstetrics and gynecology has often been disappointing, and skepticism is justified in evaluating results.*

Hormones have been used in a wide variety of obstetric and gynecologic conditions with protean results. Poorly controlled studies have resulted in unjustified claims of success, and the true value of hormones has often been obscured by false optimism. Spontaneous cures too frequently are credited to the therapy.

The action of many hormones upon the reproductive system is not well understood. Substitution therapy is commonly empiric because the exact deficiency is not known. Methods of hormone assay are difficult and do not always measure the physiologically active compound.

ACTH and cortisone have had brief popularity but equivocal success. Erythroblastosis appears with unaltered frequency when Rh-sensitized mothers are given therapy by ACTH and cortisone. Patients with preeclampsia have improved when treated with adrenal steroids, but the improvement can usually be attributed to hospitalization.

Stilbestrol exerts little effect on

many aspects of pregnancy when compared with placebos. The drug does not reduce the incidence of preeclampsia in previously normal or in chronic hypertensive patients, and the severity of toxemia is not reduced. The weight and volume of the placenta are not significantly altered. The average length of pregnancy and the incidence of prematurity are not changed by estrogens.

Estrogens and androgens frequently stop benign uterine bleeding, but spontaneous cessation may also occur. Masculinization by androgens and the possible carcinogenic effects of estrogens should be considered before using hormone therapy. Withdrawal bleeding when estrogens are stopped may be indistinguishable from resumption of normal menses.

Cyclic treatment with estrogen and progesterone may restore normal menstruation, but no evidence exists that the pituitary-ovarian relationships are altered by therapy. Replacement may be a stopgap until normal function is resumed. Endocrine treatment in abnormal uterine bleeding does not uncover the cause and must be regarded only as symptomatic therapy.

Estrogens are widely used in treatment of the menopause, but

^{*}Effects of hormones in gynecology and obstetrics, J. Internat, Coll. Surgeons 24:171-179, 1955.

most patients do well without replacement therapy. Good psychic adjustment to the climacteric is the most important factor.

Dysmenorrhea is amenable to many forms of therapy, and estrogens, progesterone, androgens, and thyroid have all given apparent benefit. Menstrual discomfort can be prevented by suppressing ovulation, but pregnancy is also prevented. Additional investigation into the causes of dysmenorrhea is preferable to indiscriminate hormone therapy.

Many hormones have been used in threatened and habitual abortion, but rest, sedation, and good hygiene often show equally impressive effects. Stimulation of decidual development by estrogen may have some value in preventing abortions.

Estrogens will alleviate puerperal mammary engorgement, but discomfort usually appears after the hormone is stopped. Late postpartum bleeding may be a troublesome result of estrogen therapy.

Many hormones have been used for sterility with equivocal results. Thyroid is most frequently prescribed but evidence of any true effect is sparse. Hormone therapy should not be used as a substitute for a thorough study of both husband and wife.

Labor in Young and Old Primiparas

F. J. HOFMEISTER, M.D., AND G. F. BURGESS, M.D., MIL-WAUKEE HOSPITAL, MILWAUKEE, WIS., believe that neither the young nor the old primipara constitutes an obstetric problem if prenatal care is early and adequate and the physiologic age and potential of the patient are correctly appraised.

The duration of labor was not prolonged in 196 primiparas from 35 to 45 years of age or in 136 primiparas from 12 to 15 years of age. Incidence of abnormal presentations was not increased. Cesarean section was done for about 21% of elderly primiparas and for approximately 5% of patients of all ages. The increased incidence of surgical intervention is partially attributable to the desire to secure a live infant when subsequent pregnancies were not probable. No cesarean sections were done for the younger group of women.

Preeclampsia is more frequent among young and old primiparas than among an unselected group of primi- and multiparas. Among older women, the cardiovascular-renal system responds less favorably to the stresses of pregnancy, and a predisposition to hypertensive heart disease may simulate true preeclampsia. In the younger group, the toxemic condition usually occurs in unmarried pregnant girls with insufficient prenatal care and symptoms of excessive weight gain, elevated blood pressure, albuminuria, or edema.

Labor in young and old primiparas. Obst. & Gynec. 6:162-168, 1955.

Prolongation of Pregnancy

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Noninterference is advocated for instances of postmaturity until further studies are made.*

Gestation may extend beyond the expected date of confinement and occasionally is protracted for 335 or more days. Evidence suggests that fetal welfare is jeopardized if pregnancy continues far beyond the usual length of gestation.

Prolongation of pregnancy in animals produced by, for example, injection of gonadotrophic hormone causes changes in the fetal organs, placental degeneration, and fetal death. In human placentas, progesterone values are 2 to 6 times higher than usual when postmaturity is a factor, and estrogen values are half the normal level.

Because of diffusion gradients, fetal tissues must necessarily exist under oxygen pressures approximately one-third that to which adult blood is exposed in the pulmonary capillaries. The fetus lives in a state of continuous cyanosis. At the thirtieth week of pregnancy, the average oxygen content in the umbilical vein is 14 vols. % with a 70% saturation. Content is reduced to 12 vols. % with a saturation of 60% when the fetus is 39 weeks old and to 8 vols. % with 30% saturation at 43 weeks.

At term, the efficiency of the maternal uterine circulation becomes impaired, and placental capability may decrease when impairment is prolonged. The oxygen consumption of the human placenta per unit weight decreases as pregnancy advances, and reaches the lowest value at term.

Histochemical and morphologic aging of the placenta occurs as term approaches, and degenerative changes with intervillous thrombosis, fibrin deposition, and syncytial knot formation are noted. Fetal growth rate diminishes in the last few days of pregnancy; the decrease is associated with diminished placental transfer, which is critical for the fetus if long continued.

Many clinics in England induce labor, principally on the assumption that oxygen supply is reduced as pregnancy goes beyond term. However, additional studies will be necessary before intervention is universally adopted as a policy for postmaturity.

Determinations of oxygen content in cord blood at delivery of postmature infants should be made. Results should be corroborated, if possible, with radioactive placental transfer values.

The oxygen tests are reliable only when cesarean section is performed without systemic anesthesia or sup-

^{*}Prolongation of pregnancy: a review. Obst. & Gynec. Surv. 10:311-362, 1955.

plementary oxygen, the cord is delivered first, and an undisturbed segment is clamped. In low cervical cesarean sections, delivery of the cord before the fetus is usually impossible. Vaginal delivery involves variable factors. Fetal mortality should not be attributed to postmaturity without considering other associated factors that may have contributed to death. Fatalities must be classified according to whether fetal death occurred before or during labor.

Infectious Hepatitis and Pregnancy

JOHN S. LONG, M.D., HARRY BOYSEN, M.D., AND FRED O. PRIEST, M.D., UNIVERSITY OF ILLINOIS, CHICAGO, state that patients with hepatitis during the first two trimesters of pregnancy may recover or the disease may become chronic, but the prognosis in the third trimester and the postpartum period is not good. Of 5 patients with hepatitis during the third trimester, all delivered prematurely, and 2 patients and their infants died.

Prodromal symptoms, occurring about ten days before the onset of noticeable icterus, include general malaise and fatigue, chills and fever, bowel dysfunction with several bowel movements a day, anorexia, and nausea and vomiting. In 9 patients, the icterus index, alkaline phosphatase, total bilirubin, cephalin flocculation, thymol turbidity, and cephalin-cholesterol flocculation were increased. The nonprotein nitrogen was elevated in only comatose patients, the prothrombin was depressed in all cases, and the total serum protein was depressed only in terminal cases.

In half of patients, the possible source of contact was either bloodcounting lancets or hypodermic needles. The probable incubation period varied between twenty-one to fifty-eight days.

Treatment of the disease in the first two trimesters is mainly directed at the hepatitis. General supportive measures such as high-vitamin, high-carbohydrate, and high-protein diet are essential.

When massive necrosis of the liver occurs, premature labor usually ensues. Abdominal operative procedures are not advisable, since the outcome is usually fatal as in other cases of severe liver damage. The disease is more serious in the postpartum period, showing that emptying of the uterus does not solve the problem.

If labor is premature, preparation should be made to control hemorrhage. As safe an analgesic and anesthetic agent as possible should be administered. The problem of whether or not to give blood before delivery for the improvement of clotting is unsolved because of the possibility of the occurrence of an adverse blood reaction in an already damaged liver. Aureomycin is recommended.

Infectious hepatitis and pregnancy. Am. J. Obst. & Gynec. 70:282-288, 1955.

Management of Breech Delivery

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Mistakes are inherent to breech delivery; excellent judgment is required to reduce fetal morbidity and mortality.*

THE patient with ruptured membranes or in early labor with breech position after thirty-three or more weeks of gestation must be thoroughly evaluated by careful abdominal and vaginal examination. Roentgenograms of the fetus and pelvimetry may be advisable.

Breech delivery with dilatation and normal descent produces few difficulties and the perinatal mortality is low. However, complications should be anticipated and prevented. Difficulty may be encountered in recognizing a completely dilatable cervix and in delivering the shoulders and head.

If descent of the breech is normal, 0.5% Novocain is infiltrated into the perineum at crowning and episiotomy is performed. As soon as the breech is stemmed under the symphysis, the patient is anesthetized, preferably with drop ether, and the remainder of the delivery is completed without the patient's aid. The Celsus-Wigand-Martin maneuver is usually effective for engaging the head in the posterior, oblique, or lateral diameters of



the inlet and delivery can be easily completed. If this maneuver fails, the combined maneuver of Dieckmann is used if the head is in the pelvis. With this maneuver, one operator applies the forceps, while the other operator, with the baby straddling his forearm, pushes the head from above and at the same time flexes the baby's head by fingers in its mouth.

If uterine contractions are irregular, weak, and of short duration, the decision between vaginal delivery and cesarean section should be made six to eighteen hours after onset of labor or rupture of membranes. Delivery should be by elec-

*Breech delivery at the Chicago Lying-in Hospital, 1945-1952. Am. J. Obst. & Gynec. 70:252-265, 1955.

tive cesarean section when [1] the pelvis is contracted; [2] cephalopelvic disproportion is probable because the baby is estimated to weigh over 4,000 gm. and the mother is a primipara over 30 years of age; and [3] a previous breech presentation has resulted in a dead or damaged baby.

If the cervix becomes completely dilatable but the breech remains at the pelvic inlet, the patient is given surgical anesthesia with drop ether or chloroform, the breech is broken, and delivery is completed. Obtaining both feet is desirable but with uncertainty concerning dilatability of the cervix the delivery is continued after obtaining only one foot. A deep episiotomy is performed when the feet are through the vulva. The descent should be slow with traction in the proper planes. The posterior shoulder

should be gently rotated anteriorly when, with slight traction, the scapula will appear under the symphysis. The fingers can then be used to splint the humerus and the arm can be delivered. The other shoulder is then rotated anteriorly and similarly delivered. Rarely the posterior shoulder may have to be pulled into the pelvis and then rotated anteriorly.

Use of high or floating forceps is inexcusable. Forceps are just as dangerous to the aftercoming head as to the floating forecoming head and should not be employed if the head cannot be brought into the pelvis bimanually under deep ether or chloroform anesthesia.

The vaginal vault and the cervix should be inspected and the interior of the uterus should be palpated after all deliveries of an aftercoming head.

Sequelae of Vaginal Hysterectomy

S. LEON ISRAEL, M.D., UNIVERSITY OF PENNSYLVANIA, PHILA-DELPHIA, reports that vaginal complications occur after vaginal hysterectomy in over one-third of patients, although the procedure entails less morbidity, postoperative discomfort, and risk than abdominal hysterectomy.

By postoperative observation of vaginal hysterectomies in 96 patients, complications severe enough to require therapy were observed in 39. Granulation tissue was seen in 31 women and was effectively treated by electric cautery and subsequent intravaginal use of Triple Sulfa Cream. The incidence of granulation tissue after vaginal hysterectomy is less than after the abdominal procedure, but the degree is greater. Histologic examination is necessary, since granulation tissue may be sufficient to simulate a prolapsed uterine tube.

Enterocele, prolapse of an oviduct, or endometriosis was treated in 8 other patients.

Vaginal sequelae of vaginal hysterectomy. Am. J. Obst. & Gynec. 69:87-93, 1955.

Umbilical Cord Casualties

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Frequent careful auscultation of the fetal heart and thorough abdominal, vaginal, and roentgenographic examinations are required to reduce the number of umbilical cord casualties.*

To decrease the morbidity and mortality arising from compromise of fetal blood supply, the physician must be able to recognize cord anoxia and understand the serious and rapid effects on the fetus. The principal causes of umbilical complications are: [1] cord neoplasms, including dermoids, myxomas, fibroids, myxosarcomas, and hemangiomas; [2] relative or absolute shortening of the cord; [3] breech delivery with cord compression; [4] cord prolapse; and [5] torsion, looping, and true knotting.

Excessive fetal movement predisposes to looping and knotting of the cord. A presenting part which remains high may suggest a short cord as well as placenta previa.

Since fetal damage or death may occur rapidly, evaluation is necessary without delay. The diagnosis may be made clinically or by special roentgenologic studies, but repeated examinations are essential. The diagnosis of true or relative shortening of the cord may be substantiated by Hamilton's test. When

the fetal head is pushed downward into the pelvis, the pulse rate is lowered to less than 80 beats per minute if the cord is short or mechanically compromised. Removal of the pressure restores the fetal pulse to over 120 beats per minute.

Angulation of the fetal head on films indicates loops of cord about the infant's neck. Roentgenographic location of the placenta and search for congenital fetal anomalies and abnormal positions are recommended. Sterile vaginal examination may reveal cord anomalies directly and also provides information regarding the pelvic outlet.

During labor, signs of fetal distress are sought with repeated sterile vaginal examinations and a search is made for cord presentation or prolapse, vasa praevia, or abnormal presentation. Bloody amniotic fluid, if associated with rupture of the membranes, is examined carefully for nucleated fetal red blood cells, and the fetal heart is auscultated immediately. Meconium in the amniotic fluid, especially with vertex positions, may indicate fetal distress.

The fetus is in grave danger if the fetal heart rate increases progressively during uterine contractions to a rate of 160 beats a minute and does not slow between contractions, or if an initial tachy-

^{*}Umbilical cord casualties. Am. J. Obst. & Gynec. 70:492-499, 1955.

cardia is followed by slowing to less than 100 beats per minute. When the fetal heart disorder can be corrected by administration of oxygen to the mother, deep Trendelenburg or knee-chest positioning, or digital elevation of the presenting fetal parts, the damage is still reversible and is probably related to cord shortening, compression, or prolapse. Failure of the fetal heart to return to normal after these basic maneuvers is an indication for immediate delivery, either vaginal or abdominal.

Treatment of fetal cord anoxia depends upon expeditious delivery with little trauma to mother or fetus. Factors which must be taken into consideration are: [1] the degree of anoxia evident in the fetus; [2] presenting position and station; [3] congenital anomalies; [4] the type of cord disorder involved; [5] the age, parity, and obstetric record of the mother; [6] the estimated time remaining before spontaneous delivery; [7] the condition of the cervix and membranes; [8] the adequacy of the pelvis; and [9] coincidental complications of the pregnancy. A pediatrician should be in attendance at the delivery whenever possible.

Vaginal delivery is usually satisfactory if delivery is anticipated within the hour or, if fetal anoxia is severe, within a few minutes. A dead or malformed fetus may also be delivered from below. Rupture of the membranes may hasten labor but is not recommended in vasa praevia with a live fetus unless delivery is imminent. Willett forceps may be used to deliver a dead fetus or to facilitate delivery after replacement of a prolapsed cord. "Bagging" a patient is unsatisfactory. Recurrence is common after manual replacement of a prolapsed cord and more definitive therapy is often needed. Dührssen's incisions, version and extraction, and low forceps application may be used in selected instances, but with severe fetal distress even the most efficient vaginal delivery may increase fetal anoxia to an irreversible stage.

Indications for cesarean section are: [1] progressive, severe fetal anoxia which will be increased by further descent; [2] previous sterility of the mother; [3] an elderly primipara; [4] faulty position of the fetus; [5] anticipation of a long labor; [6] prolapse of the cord early in labor; and [7] vasa praevia with a live fetus.

¶ MENOPAUSAL SYMPTOMS are best controlled by education of the patient as to the process of the menopause and by sedation. After discussing the syndrome and the patient's problems, Harry S. Friedlander, M.D., of New York City prescribes a combination of mephenesin and secobarbital (Seconesin) for daytime tension and Carbrital for insomnia. If vasomotor disturbances, hot flushes, and sweats are not sufficiently reduced, small doses of natural estrogens are administered orally for a limited time.

Postgrad. Med. 18:94-98, 1955.

Urinary Tract Injuries in Pelvic Surgery

RALPH C. BENSON, M.D., AND FRANK HINMAN, JR., M.D. University of California, San Francisco

Gynecologists should be able to prevent and correct urinary tract injuries during pelvic surgery.*

R isk of severe ureteral, bladder, or urethral injury during gynecologic surgery is increasing because radical procedures are being employed more often. Pelvic operations most frequently associated with urinary damage are radical hysterectomy and, secondly, total hysterectomy.

Ureteral stricture, severance, fistula, or occlusion may be caused by pelvic surgery. The following preventive measures are employed:

• Preliminary studies of the urinary tract should be done.

• The ureter should be catheterized before difficult surgery (see illustration).

 Structures should be identified before clamping, incision, and ligation.

 Undue traction and needless denudation of the ureter and base of the bladder must be avoided.

• Deft technic with fine absorbable suture material is employed in and about the urinary tract.

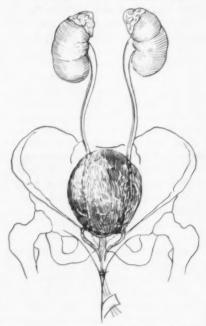
• Pressure, not mass ligature, should be applied for hemorrhage before the bleeding point is secured.

• If urinary tract injury is suspected, the ureter is splinted, the blad-

der is drained, and the wound cavity is drained extraperitoneally.

 Chemotherapy should be prescribed if complications occur.

Treatment is easiest if the ureteral damage is recognized at initial surgery. Basic urologic principles must be observed for safety and for good results. [1] Adequate drainage must be provided for possible leakage of urine whether a water-tight repair



Insertion of ureteral catheters before removal of a fibroid tumor

*Urinary tract injuries in obstetrics and gynecology. Am. J. Obst. & Gynec. 70:467-485, 1955.

can be done or not. [2] Continuity of urinary conduits should be attempted, since proper coaptation decreases leakage and periureteritis and allows proper peristaltic flow. [3] The area of repair should be splinted with an indwelling tube to permit epithelization and decrease scarring, contracture, and obstruction.

Deligation is necessary if mass ligatures have encircled the ureter.

Anastomosis is required for severance. Reanastomosis of the proximal ureter to the ureteral stump by a T-tube technic is recommended. Stay sutures are placed through the cut ends, and a T tube is notched at the T. A short incision is then made 2 to 4 cm. above the site for anastomosis, and the lower arm of the T tube is inserted to traverse the anastomotic site into the distal segment. The upper arm is passed proximally, and 4 No. 0000 chromic everting mattress sutures close the defect around the tube as a splint. An extraperitoneal Penrose drain is inserted.

If the distal stump is too short, the ureter is anastomosed to the bladder.

Decompression is preferable to implantation if the ureter is badly damaged and careful anastomosis is impossible. A small catheter may be inserted in the ureter from the cut segment, and the cut end is passed extraperitoneally through a stab wound in the lower abdominal quadrant. Definitive repair can be done at a later date.

Anuria usually is caused by factors other than bilateral ureteral ligation. The phenolsulfonphthalein (PSP) test differentiates between prerenal oliguria, caused by dehydration or cardiac failure, and renal damage. Low or absent PSP excretion after a gynecologic operation is a sign of lower nephron nephrosis or ureteral occlusion, and the ureters should be catheterized immediately.

If the catheters can be passed easily to both renal pelves and urinary flow is not obtained, a retrograde pyelogram should be made to detect extravasation.

Deligation or nephrostomy must be done if the catheters are blocked in the ureters. Nephrectomy is preferred if the patient is in poor condition and for elderly persons with damage to the kidney from infection associated with fistula. The operation should be done only if the other kidney is not impaired.

Vesical injuries noted after gynecologic procedures include incision or laceration of the bladder and vesicovaginal and vesicoabdominal fistulas. When injury is recognized, the site of repair and the bladder must be adequately drained.

The wall of the bladder is mobilized to prevent tension during closure. The muscularis and adventitia are closed in a single layer with No. 0 chromic catgut, and the peritoneum overlying the damaged area is approximated. An extraperitoneal Penrose drain is inserted.

If urethral injury is recognized at operation, the damage is repaired at once. Mobilization of tissue layers and coaptation with fine, interrupted absorbable sutures are required. Drainage of urine is usually necessary for healing.

Hormone Therapy of Allergies in Children

SAMUEL J. LEVIN, M.D. Wayne University, Detroit

ACTH or steroid hormone therapy is a valuable supplement to conventional management of allergic conditions of children.*

Improvement in allergic states induced by hormone therapy is generally of short duration since the immunologic basis is not altered. Symptoms recur promptly unless causative factors are removed.

The hormones should be used cautiously because the deleterious effects on growth of the child are not completely known. Therapy is generally limited to the acute stage. Untoward reactions are not observed if the drugs are administered for five to seven days only.

Long-term treatment is seldom necessary and necessitates decreased sodium and increased potassium intakes. Body weight, urinary sugar content, and blood pressure should be measured frequently.

Rarely, a child is allergic to the gelatin vehicle for ACTH or to hydrocortisone.

ASTHMA

The hormones may be employed to treat asthma until diagnostic studies are completed and as an adjunct during relapses.

When respiratory infection pre-

cipitates status asthmaticus by a trigger mechanism rather than by true bacterial sensitivity, ACTH gel is administered for three to four successive days in addition to conventional therapy. Dosage is 40 to 60 units a day depending on weight and gradually is diminished to 10 to 20 units a day. Antibiotic therapy is essential when respiratory infection and allergy occur together because the hormones allow the infectious disease to spread.

If response to ACTH is poor, or if daily injections are inconvenient, cortisone or hydrocortisone may be used. Dosage depends more on the severity of symptoms and response to therapy than on age and weight.

Approximate dosage of cortisone for a child over 5 years of age with severe asthma is 25 mg. administered three to four times the first day, twice the second day, once or twice the third day, and once the fourth day and 12.5 mg. the fifth day. Dosage of hydrocortisone is about two-thirds that of cortisone.

Alternating courses of hydrocortisone and ACTH gel are advisable if intractable disease requires longterm treatment.

HAY FEVER

Among children with hay fever who do not respond to convention-

^{*}Corticotropin and steroid hormone therapy of allergic states in children. Pediatrics 16:416-423, 1955.

al treatment, hormone therapy usually alleviates symptoms in three to five days. If injections of pollen extracts, selected by skin testing, are continued after hormone treatment is stopped, symptoms are less likely to recur and repeated courses of the hormones are rarely necessary.

CONTACT DERMATITIS

Treatment with ACTH gel for three to four days or a steroid for five to eight days is advisable if poison ivy or oak or other contact dermatitis persists for weeks and responds poorly to symptomatic therapy. If the offending allergen is not removed, relief is usually of short duration.

ATOPIC ECZEMA

Hormones should be used for infantile or chronic atopic eczema when most of the skin is affected. ACTH gel is given daily for three to four days in doses of 10 to 20

units a day, or hydrocortisone is prescribed for five to seven days in doses of 5 to 10 mg. a day.

During treatment, the common allergens such as milk, wheat, and eggs should be eliminated from the diet and possible irritants removed from the environment. When normal skin is available, skin tests can be carried out.

TOPICAL USE

Hydrocortisone in ointment or cream in 0.1 to 0.25% concentration reduces the pruritus and inflammation of 30% of patients with atopic and contact dermatitis. An antibiotic should be included in the medicaments.

Hydrocortisone nasal sprays are usually not effective, but Neo-Cortef, a preparation containing 1.5% hydrocortisone, gives temporary relief to 65% of patients with hay fever or allergic rhinitis. However, the high concentration of the hormone may induce systemic effects.

Pneumothorax in Infants

LLOYD E. HARRIS, M.D., MAYO CLINIC, ROCHESTER, MINN., points out that pneumothorax occurs more frequently in the first few hours of life than at any subsequent age. The cause of pneumothorax in the newborn infant is not known, but the condition may be induced by resuscitation attempts.

Symptoms may vary from a slight increase in respiratory rate to desperate dyspnea and cyanosis. Decreased or absent breath sounds, hyperresonance on the involved side, and displacement of the heart to the opposite side may be detected by percussion. With bilateral pneumothorax, diminished respiratory sounds may be the only sign.

Treatment is dependent on severity of the symptoms. If symptoms are slight, recovery is usually spontaneous. Aspiration of air is necessary for severely affected infants.

Pneumothorax in the newborn infant. Proc. Staff Meet., Mayo Clin. 30:297-301, 1955.

Epidemic Diarrhea in Infants

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A recently isolated organism of the Escherichia coli group may cause severe epidemic diarrhea in infants.*

THE onset of diarrhea from E. coli 0127:B8 may be sudden and severe with toxemia and fever or gradual with a few loose stools and slight illness. In most patients, diarrhea is intermittent.

Abdominal gaseous distention precedes an explosive onset in some instances. A pungent, musty, objectionable odor is noted. The condition mainly affects children under 1 year of age.

Colonies of the organism on Difco-Sorbitol agar do not ferment sorbitol after overnight incubation. Colonies are similar to those of *E. coli* 0111 and 055 and are agglutinated by a specific antiserum. The organism is isolated most frequently during the active phase of diarrhea.

In vitro sensitivity tests were made of 5 antibiotics. These are, in the order of decreasing bactericidal effectiveness: polymyxin, neomycin, chloramphenicol, Achromycin, and Terramycin. All strains of the organism are resistant to so-

dium sulfadiazine and dihydrostreptomycin.

The administration of 40 to 50 mg. per kilogram of neomycin daily results in a decreasing incidence of diarrhea and the organism is cultured less frequently. This dosage is of definite value therapeutically and prophylactically but is inadequate bacteriologically.

During an epidemic of diarrhea, E. coli 0127:B8 was isolated from 44 of 145 infants and from 1 nurse among 82 adult personnel in attendance. Of the 44 infants, 20 were in the first month of life, 16 were 2 to 6 months old, and 6 were 7 to 12 months of age. Only 2 were over 1 year old.

Of 22 patients with positive cultures, 12 who were treated with neomycin alone or in combination with other antibiotics continued to show *E. coli* 0127:B8 after the neomycin was withdrawn. However, only 2 of these patients had recurrences of diarrhea; both had had negative cultures while receiving neomycin.

Of the patients with the disease, 4 died. Necropsy revealed hemorrhagic enteritis in 3; cause of death in the fourth infant was a congenital heart condition.

⁶Epidemic diarrhea among infants associated with the isolation of a new serotype of Escherichia coli: E. coli 0127:B8, Pediatrics 16:215-227, 1955.

Sternocleidomastoid Syndrome

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The source of the symptom complex consisting of postural vertigo or dizziness, imbalance, and headache may be the sternocleidomastoid muscle, the chief balancing muscle of the head.*

When trigger mechanisms in the clavicular or posterior portion of the sternocleidomastoid muscle produce vertigo, imbalance, and headache, the syndrome components usually appear together. However, one symptom may be the chief complaint, or the manifestations may be successively dominant.

Vertigo is mainly postural, that is, caused by movements of the body as a whole or the head alone, involving changes in tension in the neck muscles. Neck pain and stiffness do not occur.

Vomiting is not generally associated, but nausea is frequent. Syncope may occur, even when vertigo is not severe. Spontaneous nystagmus is not noted, nor is nystagmus ordinarily elicited on lateral or vertical gaze during a period of dizziness. Impairment of hearing and tinnitus are not common. Gait is sometimes ataxic.

Every patient with headache, vertigo, and imbalance should be

examined for trigger areas in the sternocleidomastoid muscles. Local hyperalgesia, fasiculation, and the capacity to set off referred pain are manifestations of an active trigger area.

The muscle is rolled under or between the fingers to detect a spot of deep tenderness with a lowered



Fig. 1. Distribution of referred pain from firm pressure on trigger area (x)

*Postural vertigo due to trigger areas in the sternocleidomastoid muscle. J. Pediat. 47:315-327, 1955.

deep pain threshold. When a trigger area is irritated, a localized twitch is usually seen and a series of fasciculations may be set off.

When pressure is sustained on the tender spot, pain may be evoked in a remote region (Fig. 1). The patient points to the area to delineate the reference zone. If referred pain is not clearly elicited by pressure, a needle should be used.

Pain may be accompanied by autonomic concomitants localized to reference areas, including lowered skin resistance or temperature, perspiring, pilomotor stimulation, and vasoconstriction or vasodilatation. Both referred pain patterns and nonpainful concomitants of myofascial trigger mechanisms are relatively constant from person to person for a particular origin.

Vertigo may result when the trigger areas are all on one side of the neck, but the sensation is not unilateral. The imbalance may assume a definite pattern, but the direction of fall may be either ipsolateral or contralateral.

Final diagnosis cannot be made until the symptom complex disappears after a therapeutic trial of local blocking procedures. Temporary or partial relief implies insufficient treatment or reactivation of the trigger mechanism by remote disease.

An ethyl chloride spray may be used repeatedly to produce counterirritation. The local anesthetic effect is probably not important. The spray is applied in slow parallel sweeps across the muscle which is kept on a full stretch. The sweeps are applied in an upward direction

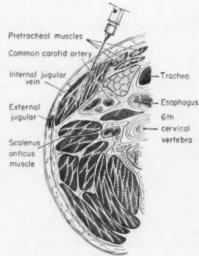


Fig. 2. Cross section of neck to show approach for infiltration of sternocleidomastoid muscle

with an interval of a few seconds between sweeps.

Infiltration of the trigger area with procaine may produce prolonged relief (Fig. 2). The muscle mass containing the trigger areas should be thoroughly needled, with continuous injections of small amounts of the solution. Dry needling or infiltration with normal saline solution eliminates trigger areas, but procaine is used since the local anesthetic action reduces local and referred pain during injection.

Other treatment consists of eliminating sources of chronic infections, such as tonsils and adenoids. The administration of a large daily dose of ascorbic acid, 500 mg. twice a day, may be helpful.

Besides infection, repetitive strain or sudden injury of the muscle and hypometabolism may be factors.

Psychologic Problems of Young Diabetics

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Children who adjust satisfactorily to diabetes often display better health, more intelligence and self-reliance, and greater happiness than those without metabolic disturbances.*

More freedom can safely be granted to young persons with diabetes now than was possible a generation ago. Immunization technics and antibiotics remove many hazards of infection. Research in nutrition allows more liberal dietary planning, and frequent insulin injections are unnecessary for many young patients.

The increasing period of survival of young patients reduces the fear of complications.

The physician must educate the patient, family, and friends. Patience, understanding, praise, and sympathy, as well as discipline and punishment, are necessary to resolve the associated psychologic problems.

DIETARY REGULATION

Restrictions of diet are the most trying limitations upon the diabetic. Early during treatment, cooperation is easily attained. Older children find diabetic arithmetic interesting, and if previous symptoms were severe, the relief provided by therapy stimulates participation. The will to win sympathetic understanding of doctor, dietitian, family, and friends is high.

In time, however, the incentives break down. Diet planning becomes monotonous, and health is taken for granted. The diet is abandoned, openly or secretly, not constantly but intermittently.

The physician should anticipate deviations. Impossibly rigid restrictions should be avoided. Cooperation may be sought through a reasonably liberal regime. Doctor and parents should be helpful, understanding guides rather than punitive judges.

INSULIN INJECTIONS

Few problems are posed for young patients by insulin therapy. Children of eight or ten years can self-administer the hormone. The technic should be made as easy and brief as possible. Chemical sterilization of syringe and needle is preferable to the time-consuming and awkward boiling.

Single daily injections are ideal. However, young diabetic patients often respond irregularly to 1 large injection of long-acting preparations, and 2 or 3 doses a day may prevent alternating hypo- and hyperglycemia and eliminate the need for precise timing of meals.

^{*}Psychologic problems of the young diabetic. Diabetes 4:207-209, 1955.

PEDIATRICS

HYPOGLYCEMIC REACTIONS

Children frequently ignore or fail to recognize early symptoms of hypoglycemia. Careful observation of parents and other close companions is essential. Severe hypoglycemia may cause bizarre behavior patterns. Unusual actions should be expected and recognized. Some form of oral glucose or other carbohydrate should never be denied a patient when he reports early symptoms of insulin reaction, even though the child may be faking to obtain extra food.

Deep prolonged or, perhaps, frequent slight periods of hypogly-cemia may produce later cerebral damage, but only occasionally. A slight insulin reaction is a cheap and convenient blood sugar determination.

VARIATIONS IN ACTIVITIES

Limitation of activity is seldom justified since more harm than good results. A constant amount of exercise is desirable but impractical. Cautious experimentation enables the patient and advisors to anticipate the effects of various degrees and kinds of activities. The

proper amount of extra carbohydrate may then be provided.

OTHER FACTORS

Anxiety concerning complications increases as the patient learns about diabetes. Such tension and anxiety interrupts the smooth course of the disease. An optimistic attitude by the physician, parents, and others is essential. Many complications can be prevented, treated, or compensated for. Complications not amenable to preventive or therapeutic measures should be ignored by patient, family, and physician.

Career, marriage, and parenthood may be problems for diabetics entering adulthood. The diabetic can and should be trained to assume a candid approach to such situations. Desired opportunities should be accepted and may provide additional stimulus to maintain control of the disease.

Satisfactory adjustment requires discipline, will power, self-control, integrity, and optimism. Such qualities build good character. Diabetic youths should be cognizant of the available rewards of successful adjustment.

TREATMENT OF DIPHTHERIA WITH ERYTHROMYCIN

effectively eliminates Corynebacterium diphtheriae bacillus in both the acutely ill patient and the carrier. Though penicillin eradicates the bacteria from the nose and throat in 75% of subjects in three to four days, M. W. Beach, M.D., and associates of the Medical College of South Carolina, Charleston, report that Erythromycin is similarly efficacious in patients with active diphtheria in about two days and in the carrier state within three days. Antibiotic therapy should be considered an adjunct to and not a substitute for diphtheria antitoxin.

Pediatrics 16:335-344, 1955.

Therapy of Acute Rheumatic Fever

ALAN K. DONE, M.D., ROBERT S. ELY, M.D., LORIN E. AINGER, M.D., J. RODMAN SEELY, M.D., AND VINCENT C. KELLEY, M.D. University of Utah, Salt Lake City

Hormone therapy ameliorates most of the acute symptoms of rheumatic fever when consideration is given to the individual requirements of the patient.*

VALVULAR damage from rheumatic fever is probably a result of either late proliferative changes after subsidence of the acute process or to long-continuing low-grade inflammation. Evidence suggests that ACTH and cortisone, if used in sufficiently high doses over long periods of time, may actually terminate the rheumatic inflammatory process.

In 62 children treated with ACTH, cortisone, salicylates, or bed rest only, the joint symptoms were relieved by all drugs. The response was somewhat more rapid to the hormones. In almost all cases, fever subsided within a few hours to two days. The mean length of time required for the elevated erythrocyte sedimentation rate to return to normal was twelve days in the cortisone group, sixteen days in the ACTH group, forty-three days in the salicylate group, and forty-eight days in the untreated patients.

When the hormone therapy was withdrawn, an elevation of the

erythrocyte sedimentation rate occurred in 52% of the patients, the so-called rebound phenomenon. However, the reappearance of other signs and symptoms of rheumatic activity was rare. In patients treated with salicylates, physical findings of rebound were relatively common.

In 80 patients observed for periods up to forty-five months, residual cardiac murmurs were rare in the hormone-treated group as compared to those treated otherwise. The incidence of residual heart murmurs three years after discharge from hospital was 6% in the hormone-treated patients and 82% in the others. New murmurs were rare in the hormone group, and those that appeared were not persistent. However, persistent new murmurs were noted relatively often after treatment with salicylates or bed rest alone.

Better results are believed to be a result of individualization of dosage and duration of treatment. The best initial dose of ACTH is at least 1 I.U. and that of cortisone is 3 mg. per pound of body weight per day. Since not all patients are relieved by these amounts, the dose should be increased, if necessary, until a satisfactory response is obtained. If effective, the initial daily

^{*}Therapy of acute rheumatic fever. Pediatrics 15:522-536, 1955.

dose should be continued until all laboratory and physical findings of rheumatic activity disappear. Then, treatment should be gradually decreased as long as the patient shows no sign of reactivation of rheumatic fever. Clinical and laboratory evaluation must be frequent during the tapering off of the hormones.

Bed rest must be maintained regardless of the therapy employed. Prophylaxis in the form of either penicillin or sulfonamides is essential. Sodium-poor diets are given to many patients receiving ACTH or cortisone but only to those with cardiac failure or severe carditis when salicylates are administered. All patients taking ACTH are given 500 mg. of ascorbic acid daily to enable efficient utilization of adrenal steroids. Response to oral cortisone is excellent. Salicylates are employed in doses of 1 gr. per pound per day in divided doses at four-hour intervals.

Gangrene after Intravenous Therapy

DONALD S. MILLER, M.D., AND ROY SEBECK, M.D., CHICAGO MEDICAL SCHOOL AND COOK COUNTY CHILDREN'S HOSPITAL, CHICAGO, warn that intravenous therapy for debilitated, cachectic, or septic infants may incite local tissue necrosis and result in total or partial gangrene of one or more extremities.

In such instances, gangrene occurs after cutdown has been performed. Cutdown is the term used to describe the combined procedures of venipuncture, incision over the vein, venesuture, and insertion of a cannula for intravenous therapy. The usual site for a cutdown is the saphenous vein just cephalad and anterior to the medial malleolus. Other sites include the area distal to the anatomic snuffbox in the wrist, any prominent vein in the cubital fossa, and the cephalic vein in the upper third of the arm.

Many babies who have gangrene after cutdown are premature. The younger the child the greater are the hazards of emboli or thrombosis. All infants are critically ill and have poor tissue nutrition. General sepsis and cachexia are common. Poor vasomotor response results from lowered resistance during infections.

Since infection is an almost constant factor in initiating gangrene after a cutdown, the procedure should be performed as aseptically and meticulously as possible. Careful handling of tissues is imperative. The cannula should be introduced gently, and contact with or trauma to arteries must be avoided.

Recommended therapy for gangrene includes sympathetic blocks, heparinization, and refrigeration of the affected parts. When feasible, debridement of tissue necrosis may be helpful.

Gangrene of the extremities in infants subsequent to intravenous therapy. Am. J. Dis. Child. 90:153-158, 1955.



" I USED TO WORRY ABOUT YOU, JOE, UNTIL THE DOCTOR TOLD ME TO TRY
SERPASIL. NOW I DON'T EVEN WORRY ABOUT THE INSURANCE."

"... Whenever I run out of Serpasil my tension headaches come back"

Typical comment from a patient when asked to describe the effect of Serpasil; patients suffering from anxiety states with minimal or no depressive features showed moderate to marked improvement on dosages varying from 0.25 mg. to 2.5 mg. of oral reserpine daily.

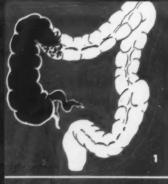
Drake, F. R., and Ebeugh, F. G.: Ann. New York Acad. Sc. 61:198 (April 15) 1955.

Supplied: Tablets, 0.1 mg., 0.25 mg. (scored), 1.0 mg. (scored), 2.0 mg. (scored), 4.0 mg. (scored). Elixir, 0.2 mg. per 4 ml.

PSYCHIATRIC USE ONLY: Elixir, 1.0 mg. per 4 ml.; Parenteral Solution, 2-ml. ampuls, 2.5 mg. per ml.

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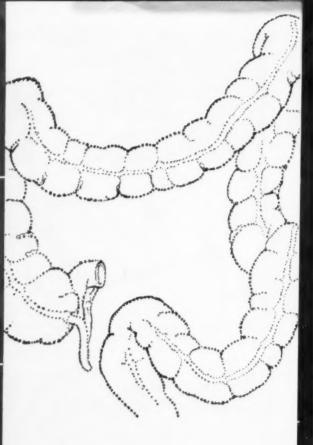
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Roentgenographic pattern of colon mass propulsion;¹

"The haustral markings suddenly disappear, the bowel appearing radiologically as a solid unsegmented column. A strong and rapid peristaltic wave then travels over the transverse and descending colons carrying all before it. The haustral markings then reappear. The contents of the more proximal portion of the colon are thus transferred to the pelvic colon which becomes filled from below upwards." ³

- (1) Ascending colon filled.
- (2) Unsegmented mass propelled through transverse colon.
- (3) Propulsive force follows mass through descending colon.
- (4) Pelvic colon reservoir filled.

Nervous fatigue, tension, injudicious diet, failure to establish regularity, too little exercise, excessive use of cathartics—all factors which contribute to constipation.²

Reestablishing Bowel Reflexes with Metamucil®

Sufficient bulk and sufficient fluid form the basic rationale of treatment of constination with Metamucil.

Metamucil (the mucilloid of Plantago ovata) produces a bland, smooth bulk when mixed with the intestinal contents. This bulk, through its mass alone, stimulates the peristaltic reflex and thus initiates the desire to evacuate, even in patients in whom postoperative hesitancy exists.

Contributing Factors

Such gentle stimulation is of distinct advantage in reeducating and reestablishing those reflexes which control bowel evacuation. Many factors may pervert the normal reflexes, causing finally chronic constipation. Among them are: nervous fatigue and tension, improper intake of fluid, improper dietary habits, failure to respond to the call to stool, lack of physical exercise and abuse of the intestinal tract through excessive use of laxatives.²

Correction of constipation logically, therefore, lies in the suitable adjustment of these factors. The characteristics of Metamucil permit the correction of most of these factors:

it provides bulk; it demands adequate intake of fluids (one glass with Metamucil powder, one glass after each dose); it increases the physiologic demand to evacuate; and it does not establish a laxative "habit." Metamucil, in addition, is inert, non-irritating and nonallergenic.

Dosage Considerations

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent. It is supplied in containers of 4, 8 and 16 ounces. G. D. Searle & Co., Research in the Service of Medicine.

Best, C. H., and Taylor, N. B.: The Physiological Basis of Medical Practice: A Text in Applied Physiology, ed. 5, Baltimore, The Williams & Wilkins Company, 1950, pp. 579-583.

^{2.} Bargen, J. A.: A Method of Improving Function of the Bowel, Gastroenterology 13:275 (Oct.) 1949.

Therapy for Intussusception

JENS MUNCK NORDENTOFT, M.D., AND HERBERT HANSEN, M.D. Aalborg Amtssygehus, Denmark

Surgery is required for intussusception in children only when reduction by barium enema fails or the result is uncertain.*

Barium enema reduction of intussusception shortens the length of hospital stay, obviates the risks inherent in anesthesia and laparotomy, and probably lowers the incidence of fever, vomiting, and abdominal distention. Less than half of patients require subsequent operative intervention. The mortality rate with conservative treatment is now less than 10%.

Before administration of the enema, plain roentgenograms of the abdomen are made in both the dorsal and erect positions. The degree of intestinal obstruction and, if pos-



Ileal intussusception

sible, the type of intussusception are assessed.

The diagnostic barium enema is given under low pressure and constant fluoroscopic control. When the site of intussusception is found, roentgenographic studies are made.

The therapeutic enema is then administered under gradually increased pressure up to a column of 3 or 4 ft. In patients ill less than twenty-four hours, the pressure may be increased if necessary but should never exceed 6 ft.

When the reduction is almost complete, the cecum, particularly the medial aspect at the ileocecal valve, represents the crucial point. The most important radiologic signs of reduction are complete filling of the cecum and distinct inflow into the ileum.

Postevacuation films of the colon are important. These roentgenograms provide the best means of evaluating the condition, irrespective of success or failure of the reduction. If results are equivocal, the barium enema may be repeated and further roentgenograms made, or a charcoal tablet may be given by mouth. If charcoal particles are recovered by a water enema given five hours later, patency of the intestinal passage is considered proved.

In the event that contrast media fail to enter the small intestine,

^{*}Treatment of intussusception in children. Surgery 38:311-319, 1955.

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Two distinguished oral penicillins for greater penicillin action

In one tablet, Bicillin-Vee offers the combined actions of Bicillin and penicillin V—both noted for their antibacterial reliability by the oral route.

PENICILLIN V:

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Absorption studies show that these combined actions in Bicillin-Vee have provided notably high and sustained serum concentrations.

For these new achievements in oral antibiotic therapy, prescribe Bicillin-Vee.

1. Welch, H.: Personal communication

Supplied: Tablets BICILLIN-VEE, 100 mg. (100,000 units) of benzathine penicillin G and 62.5 mg. (100,000 units) of penicillin V, bottles of 36.





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BICILLIN®:VEE

Benzathine Penicillin G and Penicillin V, Crystalline (Dibenzylethylenediamine Dipenicillin G and Phenoxymethyl Penicillin) and completeness of the reduction is in doubt, operation should be done. Patients arriving at the hospital early in the process may need expectant therapy for a few hours.

If attacks of colic or vomiting recur after examination, further roentgenographic examination or operation is indicated. Improvement is often apparent when reduction is incomplete. A child may begin to take feedings or fall asleep, but these signs are deceptive and do not prove the completeness of reduction. Roentgenographic evidence is mandatory.

The most important factor determining the mortality is the length of time allowed to elapse from the onset of the disease until treatment is instituted. No deaths should occur among patients with symptoms of less than twenty-four hours' duration.

Roentgen Diagnosis of Esophageal Varices

I. E. KIRSH, M.D., C. C. BLACKWELL, M.D., AND H. D. BEN-NETT, M.D., VETERANS ADMINISTRATION HOSPITAL, HINES, ILL., report that esophageal varices in most patients can be accurately diagnosed by roentgenologic examination, obviating the necessity for

esophagoscopic study with the accompanying dangers.

Esophagrams are made with the patient recumbent. The right and left anterior oblique positions are used so that the esophagus and the spine are not superimposed. Addition of 0.25% of carboxymethylcellulose aids the barium mixture in clinging to the mucous membrane of the esophagus, thereby giving a relief picture. Fluoroscopic observation is used to determine the transit time for the barium to reach the esophagus so that the esophagrams can be made with the barium in and filling the esophagus. At least 3 films should be made, since varices frequently are not visualized on only 1 or 2 films.

Roentgenographic signs of esophageal varices are characteristic scalloping of the borders of the filled esophagus and rounded expansions in the mucosal folds of the lower esophagus. Thickened longitudinal folds are not enlarged veins. Tumors of the esophagus are easily differentiated from varices because of rigidity which varices lack. Peptic esophagitis shows atypical scalloping of the borders, with the appearance of thickened mucosal folds rather than of varices.

The results of roentgen and esophagoscopic examinations were compared in 502 patients with diseases of the liver and spleen. The methods agreed on diagnosis in 90% of patients. Of the 102 patients who had positive esophagoscopic examinations, 66 also had positive roentgenograms.

Roentgen diagnosis of esophageal varices. Am. J. Roentgenol. 74:477-485, 1955.

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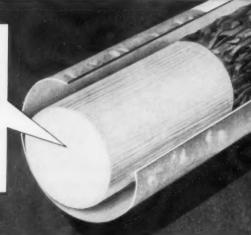
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Surgery for the Rheumatic Hand

STERLING BUNNELL, M.D. San Francisco

Function of hands crippled by rheumatoid arthritis may be restored by surgery.*

Deformities of the hand with rheumatoid arthritis are caused by joint changes with associated myositic contractures, especially of the muscles contiguous to the joints, as in the intrinsic muscles in the hand. The muscle balance between the long extensors, the long flexors, and the intrinsic muscles is destroyed so that the joints are distorted.

Muscle contractures occur during flare-ups of rheumatoid arthritis because, when the finger joints are distended with fluid, the ligaments become lax and the joints are left loose. The deformities depend on the muscles that contract.

The most common deformity is flexion of the metacarpophalangeal joints by intrinsic contracture. The middle and distal joints are pulled straight by the lateral bands, or the middle joint may hyperextend and, consequently, the distal joint flexes.

If the long extensors are primarily involved, the metacarpophalangeal joints are pulled into hyperextension, thus overcoming the resistance of the intrinsic muscles. The fingers flex at the middle joints and extend at the distal joints.

The muscles are in spasm at first from irritation but finally are fibrosed and shortened in fixed contracture. The joint ligaments share in the contracture as do all surrounding soft parts, but the position of deformity is largely determined by the muscle imbalance. In a flexion contracture, all tissues from skin to bone subsequently become contracted.

Ulnar deviation of the fingers at the metacarpophalangeal joints is usual in rheumatoid arthritis. Normally, the range of finger motion is greater in ulnar than in radial deviation; therefore, in the subsequent contracture, the long extensors, increased in tension by the overflexed proximal finger joints, stretch the affected dorsal aponeurosis and luxate into the interknuckle grooves. The joints cannot be extended but flex ulnarward.

Contraction of the intrinsic muscles dislocates the proximal phalanges to the volar aspects of the metacarpal heads. Passive reduction may be impossible.

The thumb, drawn by the short flexors in the thenar eminence, overflexes in the metacarpophalangeal joint. Consequent pull on the long extensors hyperextends the distal joint. If short adductors predominate, the first metacarpal is drawn toward the third.

^{*}Surgery of the rheumatic hand. J. Bone & Joint Surg. 37-A:759-766, 808, 1955.



She'll enjoy this pregnancy

Fifty per cent of all pregnant women even those on a "good" prenatal diet—suffer calcium deficiency symptoms.*

New evidence shows that because of calcium-protein antagonism, calcium phosphate supplements may actually cause a deficiency, just when optimum levels are desired. And high-protein diets are also rich in calcium-draining phosphorus. Thus leg cramps are a minor symptom of major significance: they may indicate seriously low calcium.

Calcisalin, a complete prenatal supplement, containing 100% of the MDR for vitamins and iron, is also completely physiologic. Phosphate-free and phosphorus-eliminating, the calcium lactate assures readily assimilable calcium, while the aluminum hydroxide gel takes up excess dietary phosphorus without interfering with the value of other nutrients.

"Noncomplainers" consider leg cramps "normal" and complain only when cramps are severe. Thus the number of complaints does not truly reflect the higher incidence of calcium depletion. To safeguard against serious, "silent" calcium depletion, all women who enjoy a highprotein prenatal diet can benefit from Calcisalin's phosphate-free, phosphoruseliminating properties.

Dosage: Two tablets three times daily.

Available: Bottles of 100 tablets and in 8-ounce nursing bottles of 300 tablets.

*Wolff, J. R.: Illinois M. J. 105:6 (June) 1954.

Calcisalin

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Gentle elastic traction should be applied to maintain the position of function as soon as contractures commence. The reverse knucklebender splint and the spring cockup splint are useful. Exercise of the muscles lessens the atrophy.

About 70% of the patients with rheumatoid arthritis improve. The usual course is three to five years, though exacerbations may occur.

Surgery should only be used for inactive sequelae. Arthrodesis may be advisable for the wrist, for some finger joints, and even for both joints of the thumb to restore the position of function.

Tension may be relieved by tenotomy of the lateral bands or transverse aponeurosis in the fingers; the procedure allows the metacarpophalangeal joints to extend and the 2 distal joints to flex. Tension of all 3 sets of muscles may be relieved by shortening the metacarpals at the bases by removing a segment of bone and pinning temporarily with Kirschner wires.

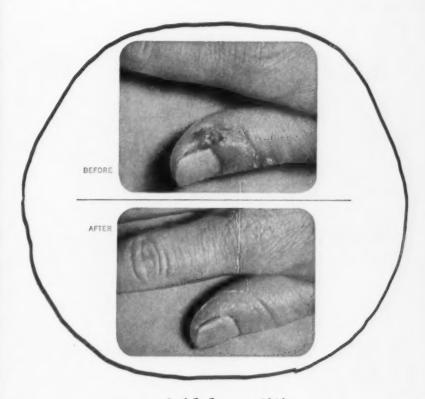
Dislocations of the metacarpophalangeal joints should be reduced passively, if possible. If reduction is not possible, excision of the metacarpal heads and arthroplasty should be performed. The new joints should be pinned in alignment until enough fibrous tissue contracts to provide stability.

Thumb deformities are relieved by shortening the metacarpal at the base. For flexion contracture of the thumb web, the web should be cut across from the base of the metacarpals behind to the base in front. Then, by dissecting and removing the fascia and fibrotic adductors, the cleft can be spread open and so fixed temporarily by 2 crossed Kirschner wires through the first 2 metacarpals. If no musculature is left, a wedge bone block is used to hold the thumb in opposition. The cleft is covered by a pedicle graft from the abdomen.

With ulnar drift, metacarpals shortened at the bases should be extended by tenotomy of the lateral bands and of the transverse aponeurosis. Each extensor tendon should be lifted free from the dorsal aponeurosis and transferred and sutured into a slit in the dorsal aponeurosis on the radial side of the knuckle. If arthroplasties are done, a tendon transfer of the extensor indicis proprius to the radial side of the lateral band of the index finger and a similar transfer for the little finger furnish abduction.

¶ HYPERTENSION DUE TO RENAL COMPRESSION by a hematoma may be successfully treated by nephrectomy. William J. Engel, M.D., and Irvine H. Page, M.D., of the Cleveland Clinic and the Frank E. Bunts Educational Institute, Cleveland, report that preoperative blood pressure average of 140/89 mm. of mercury dropped to normal levels after nephrectomy in a 19-year-old male with subcapsular hematoma of the right kidney. Renal excretory functional tests made four months after surgery were normal.

J. Urol. 73:735-739, 1955.



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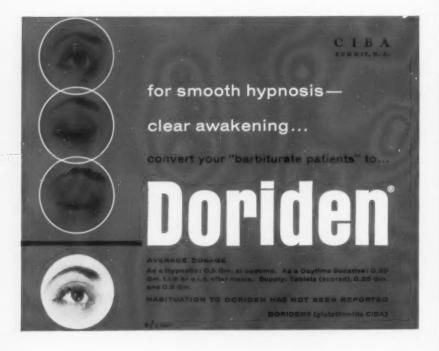
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Asymptomatic Urologic Disease

OTTO J. WILHELMI, M.D. St. Louis

Extensive disease of the urinary tract may exist without causing any subjective symptoms.*

BLOOD or pus in the urine often evokes a diagnosis of cystitis or bladder neck obstruction before an adequate examination has been performed. Because of this, more serious diseases such as hydronephrosis, nephrolithiasis, and tumors of vesical or renal origin are frequently overlooked. Administration of antibiotics before a definitive diagnosis masks both symptoms and disease, and the condition often progresses to an irreversible state.

When a diagnosis of cystitis is made on the basis of frequency, tenesmus, and pyuria and no attempt is made to investigate the bladder or upper urinary tract, a recurrence may be expected several weeks later. Often the source of infection is not primarily in the bladder but rather above or below it. Careful renal and vaginal examinations reveal the origin. Commonly, quiescent disease in the bladder or kidney is found after gastrointestinal and pelvic studies have disclosed nothing.

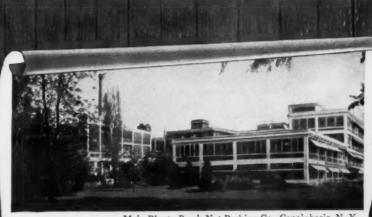
To understand asymptomatic renal disorders, knowledge of the neurophysiologic aspects of pain is essential. The nerves of the kidney are derived mostly from the solar plexus and pass to the organ from the celiac, superior mesenteric, and aorticorenal ganglia. Most of the nerves accompany the renal artery to the kidney and enter the parenchyma of the kidney by orifices around the papilla of the malpighian pyramids. Nerve fibers in the parenchyma are mostly small and unmyelinated.

The kidney can be cut or torn without pain. The renal pelvis is apparently more sensitive to pain than the rest of the kidney. Stimulation of the sensory fiber termination in the perirenal peritoneum is a probable factor.

Ureteral catheterization also can be done without pain. However, dilation of the renal pelvis causes discomfort unless the renal plexus has been divided previously, suggesting that afferent impulses which give rise to renal pain are mediated through the visceral afferent fibers traversing the renal plexus.

The autonomic nervous system is not implicated in the transmission of pain from kidney to central nervous system. Only afferent fibers that travel with the autonomic nervous system to the spinal sensory system are concerned. Thus, a patient with destroyed afferent nerve endings may have no pain from a diseased kidney.

Asymptomatic urologic disease. South. M. J. 48:949-954, 1955.



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Complications after Anorectal Surgery

RAYMOND E. ANDERSON, M.D., GUY V. PONTIUS, M.D., AND LEON J. WITKOWSKI, M.D. ' St. Luke's Hospital and Northwestern University, Chicago

Unrecognized or untreated complications of anorectal surgery are not only annoying or disabling but may be psychologically disturbing since convalescence and dysfunction are prolonged.9

FECAL impaction, bleeding, infection, and excessive pain, the early complications of anorectal surgery, prevent or delay healing and may cause unsatisfactory function. Late sequelae, including stenosis of the anal outlet, fistula formation, incontinence, and disruption of the mucocutaneous junction, may necessitate additional surgery.

Restoration of anal outlet configuration after surgery is the best method for eliminating or reducing incidence of complications. Frequent postoperative rectal digital examinations assure better healing by promoting drainage, prevent formation of excessive scar tissue, and often reveal complications early.

Postoperative hemorrhage is potentially lethal, and prompt action is essential. The exact source of bleeding must be located and specific treatment begun. All rectal bleeding is not stopped by a pack on or in the anal outlet and strapping the buttocks.

Bleeding may occur from the

skin, external sphincter, or the internal structures of the anal canal. Oozing from the skin is best controlled by pressure dressing, but the blood-clotting mechanism should be investigated if hemorrhage persists.

Since the external sphincter has rich arterial supply from the inferior hemorrhoidal arteries, incision or manipulation of the sphincter may cause vigorous arterial bleeding. When bright red blood flows steadily from the anal canal, the patient should be taken to the operating room. After topical anesthetic, such as 1% Nupercaine, is applied or 1% procaine is infiltrated, the bleeding vessel is located and ligated.

Passage of large clots of dark blood associated with other signs of loss of blood is evidence of internal hemorrhage. If shock is impending or has occurred, whole blood should be administered before the patient is taken to surgery. A rectal pack may be inserted for temporary control if 500 cc. of whole blood does not alter the blood pressure or pulse.

When the patient is out of shock, general anesthesia is given and a search is made for the bleeder. If the exact source of bleeding is obscured by a submucosal hema-

^{*}Complications following surgery for benign anorectal lesions. J.A.M.A. 159:9-17, 1955.



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toma, a pack may be placed in the lower ampulla and anal outlet and left for two to three days. A lowresidue diet is prescribed for several days after the pack is removed.

Incidence of hemorrhage is reduced when hemorrhoidal vessels are ligated cephalad and when a running, locking suture is placed over the hemorrhoidal bed after sphincter fibers are dissected away from overlying tissue. All arteries should be individually ligated. Sutures and ligatures should be inspected to insure that bleeding is controlled by the knot, rather than by tension.

Fecal impaction is a common complication and may exist even though bowel movements are regular. In many instances a preoperative bowel study with barium contributes to formation of hard stools; therefore, barium studies should be performed four or five days before surgery to allow complete evacuation of barium.

Though a mass can generally be detected by finger examination, a peripheral impaction may be overlooked if pain and spasm are excessive. Administration of an opiate may be necessary.

The feces are removed by daily digital fragmentation and oil or saline enemas. Sedatives are given before the procedure, and anesthetic ointment and hot, moist compresses may be applied afterwards.

Degree of postoperative pain depends on threshold to pain, fear, and technic of surgery. When an inadequate amount of skin distal to the mucocutaneous junction is removed, lack of drainage and sub-

sequent inflammation produce pain; warm saline packs or sitz baths relieve congestion.

When too much skin is removed, the denuded external sphincter fibers are exposed, and pain and spasm occur; Mercurochrome should be applied twice daily, and topical anesthetic agents may be used.

Severe pain may also be caused by sutures and ligatures piercing the sphincter muscles. Mass clamping and bulk ligation must not be done. Local anesthetics and administration of narcotics are recommended. Frequent digital dilations break up adhesions, prevent sealing of skin edges and, therefore, promote drainage and healing.

Trauma of surgery increases the chances for *infection*, particularly when free drainage is not provided. Ligatures may carry infection into the deeper portion of the tissues.

Most of the infections begin at the anal margin or at the mucocutaneous junction and are caused by a mixture of colon bacilli. When signs and symptoms of infection appear, digital and, if necessary, proctoscopic examinations should be made. Localized abscesses must be drained. Frequent finger dilations, hot compresses, and sitz baths promote free drainage and hasten healing. Adequate vitamin and fluid intake, rest, and antibiotic therapy are also important.

Narrowing of the anal outlet may result from excess removal of the anal skin, infection, or inflammatory changes with subsequent scar formation. The commonest site of stricture is at the

(Continued on page 154)



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153

mucocutaneous line, and the diagnosis is best established by digital examination.

Treatment consists of stretching and massaging the fibrous band. When the contracture is severe, several radial incisions in the scar produce relaxation. No attempt is made to dissect a portion of the scar. After incision, digital dilation is performed twice weekly for as long as eight to ten weeks.

When infection causes dense induration in the pectineal fascia of the anal canal, the band should be incised in the posterior midline.

Anal incontinence is generally caused by laceration of the sphincter muscle with faulty healing of the fibers, but excessive stretching of the sphincter at surgery before the patient is completely relaxed may be the etiologic factor. Inability to control bowel movement may vary from minor seepage to gross incontinence.

Direct end-to-end approximation of the sphincter muscle is probably the best treatment. A moderate amount of overcorrection is desirable. Imbrication may be preferable when incontinence is longstanding or much muscle tissue has been lost. Utilization of fascial strips, wire sutures, or muscle transplants is advisable in some instances. Plastic repair is difficult but satisfactory.

When atony causes leakage of rectal contents, sphincteric exercise, voluntary contraction of the anal musculature 50 to 100 times each day, is beneficial.

When the skin is permitted to heal faster than the underlying tissues, a bridge of skin allows a tunnel-like defect to form and a mucocutaneous fistula results. Fistula formation can be prevented by repeated dilation of the anal outlet to break down the epithelization; healing is then permited to progress from the depths of the wound. When mucocutaneous fistulas are found, the tract is opened by digital manipulation, or the scar is incised after topical or local anesthesia is given.

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Alteration of the mucocutaneous junction causes constant seepage of mucus and fecal material. The disruption results when mucosa protrudes in the lower anal canal or when epithelium is brought up higher than the lower border of the mucous membrane. Irritation, infection, sloughing, pain, spasm, and ulceration may occur.

Disturbances at the mucocutaneous junction occur less frequently after excision of severe mixed hemorrhoids if the incision into the mucocutaneous line is made with a scalpel rather than with scissors; crushing clamps should not be applied with tension at the edges. When the junction is disrupted, surgical correction is advisable.

Anal pruritus after surgery may be caused by a mechanical defect in the anal outlet, low-grade infection, or an allergic response to local medication. The exact cause may not be evident until the secondary reaction, caused by scratching and continuous medication, subsides.

Sedatives, local application of 0.5% aluminum subacetate solution three times daily, and meticulous hygiene usually control the

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- (1) Armentano, L., A. Bentsath, T. Beres, I. Rusznyak and A. Szent-Gyorgyi.
 "The Effect of Substances of the Flavone Group on Capillary Fermeability Vitamin P." Deut. med. Wochschr. 62, 1325-8 (1936)
- (2) Bartlett, G. R. "Inhibition of Succinoxidase by vitamin P-like Flavonoid 2, 3, 4 Trihydroxy Chalcone." J. Pharmacol. Exptl. Therap. 93, 329-38

irritation. When disease is refractory, 1 or 2% hydrocortisone acetate promotes healing. Mechanical factors can then be corrected. The above regimen is generally adequate for allergic or infective states, but heat, drainage, and antibiotic therapy may be necessary for severe infection.

Ulceration after operative trauma

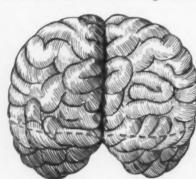
is the manifestation of a localized focus of infection. Areas of erosion may occur in any portion of the anal circumference but are most common in the posterior midline.

Tissue must be removed to provide adequate drainage and to prevent healing of the skin before the mucosa has united. Repeated dilations are also necessary.

Limited Lobotomy in the Aged

W. B. SCOVILLE, M.D., YALE UNIVERSITY, NEW HAVEN, CONN., AND V. GERARD RYAN, M.D., MIDDLESEX MEMORIAL HOSPITAL, MIDDLETOWN, CONN., recommend orbital undercutting (see illustration) for psychoneurotic patients 65 years of age or older who are not relieved by a single course of shock treatment.

Supraorbital trephines are placed as far laterally as possible. A skin incision is made along the hairline or the midfrontal crease



Location of cortical incison for undercutting

and the dura opened with a T incision, exposing the inferior tips of the frontal poles. The orbital cortex is undercut parallel to the root of the orbit at the junction of white and gray matter from the tips of the temporal lobes to a point just behind the anterior clinoids.

Of 20 patients with depression or obsessive-compulsive, anxiety-tension, or somatic conversion states, all were improved after operation. Benefits are greatest with de-

pressions and least with somatic conversion states. Sleep and appetite improve at once, as do mood and anxiety. Obsessive-compulsive thinking and conversion symptoms subside more slowly. Immediately after operation, nocturnal confusion, occasional incontinence, and slight indolence may be observed. Personality changes slightly, and epileptic seizures have not been observed after the procedure in elderly patients.

Orbital undercutting in the aged. Geriatrics 10:311-317, 1955.

2, 3, 4 Trihydroxy Chalcone." J. Phermacol. Exptl. Therap. 93, 329-38

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1. Selling, L. S.: J.A.M.A. 157: 2. Borrus, J. C.: J.A.M.A. 157: 1594, 1955.

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Detection of Brain Disease

JEROME FISHER, PH.D.

Veterans Administration Hospital, San Francisco

THOMAS A. GONDA, M.D.

Stanford University, San Francisco

When used alone, a positive Rorschach test is superior to individual neurologic technics in detecting organic brain disease.*

THE value of the Rorschach test in detection of brain lesions was investigated by comparing the validity of the test with the validities of other neurologic methods.

A group of 118 white male veterans with various symptoms referable to the nervous system were studied. All the patients received thorough neurologic examinations, including electroencephalograms, skull roentgenograms, and lumbar punctures. Diagnostic procedures, such as pneumoencephalography, were performed as necessary. In addition, a Rorschach test was given to each patient as part of a psychologic examination.

The completed hospital charts of the patients were studied independently by 2 neurologists, and the group was divided into 84 patients with and 34 without organic brain disease. Any abnormal or equivocal neurologic sign or electroencephalographic change, deviation from normal in spinal fluid, related or incidental finding in the skull

roentgenograms, and at least 5 organic signs by the Piotrowski method in the Rorschach test were interpreted as positive for organic brain disease.

The neurologic examination originally diagnosed organic disease in 63% of the 118 patients, the electroencephalogram in 62%, and the pneumoencephalogram in 46%. The Rorschach test diagnosed 29% of patients as positive; the spinal fluid, 21%; and skull roentgenograms, 16%. The latter 3 tests were considered unsuited for purposes of preliminary screening.

Neurologic examination and electroencephalograms had false-positive results in approximately 40% of cases and the pneumoencephalograms in 29%. In contrast, false-positives with the Rorschach test, spinal fluid, and skull roentgenograms were only 6, 3, and 8%.

Results were false-negative in approximately 30% of electroencephalographic and neurologic examinations, 51% of pneumoencephalograms, 62% of Rorschach tests, 72% of spinal fluid studies, and 81% of skull roentgenograms.

When diagnosis was positive for organic brain disease, the Rorschach

(Continued on page 162)

*Neurologic techniques and Rorschach test in detecting brain pathology. Arch. Neurol. & Psychiat. 74:117-124, 1955.

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(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. 1:168, 1955. (3) Holbrook, W. P.: M. Clin. North America 39:405, 1955.

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test was valid 94% of the time; spinal fluid, 95%; skull films, 88%; pneumoencephalograms, 93%; neurologic examinations, 81%; and electroencephalograms, 83%.

Results of the study show that, while the electroencephalographic and neurologic examinations have high call rates, that is, the per cent called positive by the tool, the overall validity suffers in that about 40% of nonorganic cases are falsely termed positive. On the other hand, the Rorschach test, lumbar puncture, and skull roentgenograms are less sensitive as calling procedures but the number of false-positives is remarkably low.

Problems of the Expectant Father

JAMES L. CURTIS, M.D., STATE UNIVERSITY OF NEW YORK, NEW YORK CITY, believes that many symptoms and changes in behavior associated with expectant fatherhood in both well-adjusted and poorly adjusted men may be treated by frank discussion of easily verbalized problems, such as sexual abstinence and family worries related to the pregnancy.

A projective psychologic test given to 55 expectant fathers showed that approaching fatherhood is likely to revive attitudes dormant since childhood with a corresponding effect on behavior. Of the group, 17 men were considered to have serious psychiatric problems, 14 had minor problems, and 24 were apparently well adjusted. The 31 troubled expectant fathers disclosed fantasies expressing hostility toward the infant and the expectant mother, ideas of sibling rivalry, and other childish feelings. The 24 apparently well-adjusted expectant fathers showed a greater than average pre-occupation with pregnancy, birth, and family relationships.

The group of well-adjusted men revealed some signs of anger and ambivalent attitudes, but emotional readiness for fatherhood was also apparent. Men with minor psychiatric problems had fantasies with less complete father images. Men with serious psychiatric problems, many of whom had impulsive or schizoid personalities, had meager fantasies with no strong father images and projections of feelings of weakness or badness on the coming child.

Common symptoms among the well-adjusted group were anxiety, irritability, and psychosomatic disorders which frequently resembled morning sickness and indicated identification with the expectant mother. Men with minor psychiatric disorders had similar symptoms. Of the 17 men with major psychiatric problems, 15 openly rejected the infant. Members of this group of patients tended to act out their hostility by insubordination, heavy drinking, or attempted suicide.

A psychiatric study of 55 expectant fathers. U.S. Armed Forces M. J. 6:937-950, 1955.

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Pseudohermaphrodism: Mental Factors

WILSON G. SCANLON, M.D.
Silver Hill Foundation, New Canaan, Conn.

Psychiatric and psychologic evaluation is necessary before surgical treatment of individuals who are intersexed.**

Appropriate surgical procedures should be instituted at once for a hermaphrodite baby and completed before the child is four years of age, if at all possible. Secondary sexual characteristics, such as breasts or a hypertrophied clitoris, which develop later can be surgically removed.

If the diagnosis is not made until after four years of age, surgery and psychiatric evaluation are best delayed until after puberty. Attempts to determine and foster a sex role are inadvisable between four and seven years. After pubescence, a definite libido direction may have been established.

More important than superficial appearance after pubescence is how the intersexed person feels and which sex role the individual prefers. Most choose to continue in the pattern adopted before puberty. The individual requires complete surgical, psychiatric, and social support for satisfactory adjustment.

CASE HISTORY

The patient at birth had mixed external genitalia. Because physi-

cians suspected the female would eventually predominate, the child was raised as a girl. After medical examination at age 13, the secondary sex characteristics were described as male, and laparotomy revealed a normal male pelvis. A hypospadiac repair was done with poor results. At age 14, breast development began.

Efforts to assist the patient in acquiring male attitudes and habits were unsuccessful. Social maladaptation required spending a period in a boys' correctional school. At age 22, the patient married a 16-year-old girl and was able to gratify her sexually. However, the wife obtained a divorce.

After the divorce, psychotherapy was instituted. I.Q. was 115, and the patient was articulate and interested. Projective tests suggested that the primary conflict was inability to establish an independent masculine role. Psychiatric interviews revealed that the patient had never lost preference for femininity during the thirteen years of the male role.

During interviews, the patient spoke as a woman to a man. Reversion to the female role was preferred even though a vagina was lacking, and the patient was willing to have the penis, but not the breasts, removed.

Pseudohermaphroditism: a psychological study. Dis. Nerv. System 16:207-211, 1955.

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- Bender, T. J. Jr.; at Mag. Med. Assoc. St. Alabama, Mobile, 1954.
- 2. Jessup, R., Murray, R. J. and Rossi, A.: Amer. Pract. & Dig. of Treatment, 5:792, 1954.

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Physical Therapy for Painful Shoulder

DONALD J. ERICKSON, M.D.

Mayo Clinic, Rochester, Minn.

To be effective, heat, massage, and exercise for painful shoulder must be administered under direct medical supervision.*

Pain in or referable to the musculotendinous or rotator cuff causes spasm of the shoulder muscles with consequent immobilization. If spasm and pain do not persist, this immobilization often favors spontaneous recovery. Prolonged fixation results in adhesion formation and a frozen shoulder.

To relieve pain and spasm, heat and massage can be employed. Short-wave diathermy applied by a cable electrode coiled around the shoulder and insulated from the skin by toweling is recommended

shoulder and insulated from the skin by toweling is recommended

Clavicle Superior acromio - clavicular ligament

Acromion process

Coraco-acromial ligament

Coraco-humeral ligament

Capsular

Anatomy of the shoulder

Bursa open

ing into shoulder joint

for heating the entire shoulder girdle evenly. Microwave diathermy may be applied over the tip of the shoulder joint for thirty minutes at an intensity regulated to avoid excess heat and further discomfort.

If deep heat is not tolerated, particularly in early stages of disease, radiant heat or hot packs may be used. X-ray therapy is frequently effective.

Sedative massage augments the effects of heat. Moderately firm stroking and kneading movements relax the muscles and relieve pain when tenderness is not too great. Massage can be done by a trained family member.

Restoration of motion is the second most important phase of treatment. If heat and massage, needling, or injection of hydrocortisone relieves pain, motion is restored rapidly by active exercises. If pain is severe in the acute phase, the arm is immobilized in slight abduction and midway between internal and external rotation.

The arm is removed from the splint several times daily for general, passive, relaxed reciprocal range-of-motion exercises of the shoulder joint. As pain subsides, exercises are increased.

The initial exercises consist of swinging the arm pendulum fashion in circles with the body bent

ligament

endon of

Physical therapy for painful shoulder, Minnesota Med. 38:556-558, 587, 1955.

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forward. A 3- to 4-lb. weight held in the hand increases the effectiveness. Range of motion is gradually increased.

Rotation, especially external rotation, is usually very limited. Active external rotation of the arms with the elbows close to the body stretches the internal rotators and strengthens the external rotators. Active assistance by the therapist may be necessary with very tight shoulders. As a variation, the elbows may be pulled backward with the hands clasped behind the head, making use of the reciprocal innervation principle.

The range of internal rotation is increased by placing the hand behind the back and raising it toward the scapula. The motion may be assisted by the other hand or by a pulley.

To increase mobility of the shoulder girdle the patient brings the arm up forward attempting to exceed the level of his head. This is also done while laterally supinating the hand in order to rotate the humerus and permit full abduction. The therapist prevents elevation of the scapula. A shoulder wheel, overhead pulley, and finger ladder are efficient aids to these exercises.

Treatment continues until full range of motion is regained. Home physical therapy is mandatory since progress is slow and long hospital care is often unavailable and usually too costly.

Therapy of Cervical Syndrome

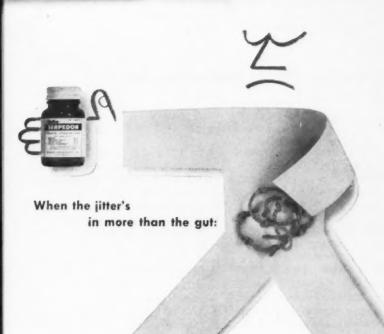
EDWARD M. KRUSEN, JR., M.D., AND URSULA LEDEN KRUSEN, M.D., BAYLOR UNIVERSITY HOSPITAL, HOUSTON, AND UNIVERSITY OF TEXAS, DALLAS, observe that, with the exception of acute fibrositis, treatment is generally unsatisfactory in patients with the cervical syndrome.

In patients without preceding trauma, the most common causes are [1] acute cervical fibrositis or myositis; [2] advanced cervical osteoarthritis; [3] scalenus syndrome; [4] cervical disk; and [5] tension neck.

Therapy begins with shortwave or microwave diathermy for thirty minutes followed by deep massage and, if tolerated, frictional massage. Vertical traction increasing gradually from 30 lb. is applied in less acute cases. All patients receive supervised rotational and lateral-bending neck exercises, avoiding extension. Some are given tetanizing current with a low-voltage stimulator to relax tense neck muscles.

About four to five weeks' treatment is required. Patients with acute fibrositis have uniformly good results but only about 40% of all others are improved.

Cervical syndrome especially the tension-neck problem: clinical study of 800 cases. Arch. Phys. Med. 36:518-523, 1955.



Serpedon* helps you treat the jittery patient with the jittery gut, not just his spasm, which is most likely a symptom of his real trouble: anxiety and tension. Serpedon is 0.1 mg. reserpine, plus three alkaloids of belladonna, equivalent to 7 minims of the tincture. Serpedon rescues the patient from his symptom-producing anxiety and tension with reserpine ... tranquilizes him, doesn't dull him. Serpedon stops spasm...stops it quickly, gives reserpine time to exert its full, tension-easing effect. Recommended dose is one tablet t.i.d. Supplied in bottles of 100 scored tablets. *tredemark

Walker Laboratories, Inc., Mount Vernon, New York

Advances in Neurologic Surgery

W. EUGENE STERN, M.D.

University of California at Los Angeles

Advances in surgery of the central nervous system provide palliation, relief, or cures of diseases formerly considered hopeless.*

The rapid progress of neurosurgical diagnostic and therapeutic technics has led to reevaluation of the prognosis in some congenital and developmental defects of the nervous system, chronic pain syndromes, epilepsy, and intracranial bleeding. To ensure that no avenue of relief is overlooked, physicians should make every effort to diagnose neurologic afflictions as accurately as possible.

Recent innovations in technic have provided gratifying and permanent alleviation in some forms of hydrocephalus. Since the infant's brain may be easily damaged by increased intracranial pressure and since ventricular dilatation can occur within weeks, enlargement of a child's head must be studied early. Detailed studies are best done in a well-equipped hospital.

Generally, hydrocephalus arises from either excessive cerebrospinal fluid production, blockage of fluid flow, or a defect in the absorptive mechanism over the hemispheres. The external hydrocephalus resulting from effusions of blood or other fluid over the outside of the brain is best diagnosed by subdural taps done through the anterior fontanel, but to prevent restriction of brain growth the membranes surrounding the effusion must later be removed through a craniotomy.

When head enlargement arises from blockage of cerebrospinal fluid flow within the brain or from excessive production of fluid, a shunting procedure can be done. An artificial by-pass is made with a tube which drains to a large, absorptive serous surface, the ureter, or the vascular system. However, if detailed studies reveal advanced damage at the patient's first visit, the parents should not be encouraged to seek radical procedures.

Cranial synostosis, or premature closure of the cephalic sutures, is also visible in the developing contour of the infant's cranium. The head may appear smaller than normal, and the condition must not be confused with microcephaly, since surgery performed early in cranial synostosis may allow normal brain development. If the condition is recognized early enough, the synostosis may be opened and artificial sutures created which prevent irreparable brain damage and improve the cosmetic appearance.

Some scalp and cranial masses can be removed safely. However,

^{*}Neurosurgery in general practice. California Med. 83:68-71, 1955.

preoperative bowel preparation within 24 hours:

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Each tablet contains 0.5 Gm. neomycin sulfate (equivalent to 0.35 Gm. neomycin base). In bottles of 20 tablets.

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what appears to be a harmless midline wen may really be the external growth of a large congenital midline tumor. Recent studies suggest that such cranial lesions deserve close scrutiny before corrective sur-

gery.

Clear understanding of neuroanatomy combined with skillful surgical management has also afforded relief to patients with intractable pain of advanced carcinoma. While patients already addicted to narcotics and those with an extremely. short life expectancy should not be operated upon, chordotomy may be advisable for many patients. For pain below the nipple line, a high thoracic cut is made in the anterolateral columns bilaterally. For severe facial and cervical pain the sensory roots of cranial and cervical nerves can be severed with little risk. Pain above the nipple line, if unilateral, is treated by high cervical chordotomy, and if bilateral by lobotomy. Lobotomy is recommended only as a last resort because of the profound effects on personality.

Increasing understanding of neurophysiology has also contributed to the relief of some forms of *epilepsy*. Specifically, focal seizures which are not controlled by medical agents or which incapacitate the pa-

tient should be studied exhaustively for any evidence of an irritable focus amenable to surgery. Children with intractable seizures and spastic hemiplegia may be greatly improved by removing the diseased hemisphere. Obviously, focal seizures which result from a potentially lethal lesion, such as a tumor or abscess, are best treated surgically. Diagnosis is facilitated by electroencephalograms, gas and positive contrast studies of the ventricular system, angiography, and radioactive isotope tracer studies.

Spontaneous subarachnoid hemorrhage, a cause of severe disability and high mortality in the prime of life, may benefit from neurosurgical procedures. The high mortality of the initial attack cannot be altered by present methods, but recurrent bleeding can be prevented if the source is identified and isolated from the rest of the cerebral circulation. Operation on intracranial aneurysms and angiomas is hazardous and difficult, but leaving the sac to rupture later exposes the patient to extremely grave complications. No patient with spontaneous subarachnoid bleeding should be denied the complete studies which will reveal whether he has an operable lesion.

¶ CRUDE COAL TAR OINTMENT is less irritating and more efficacious when a hydrophilic, nonionic surfactant is added to the mixture. Robert G. Carney, M.D., and Louis C. Zopf, M.S., of the State University of Iowa, Iowa City, report that only 3.1% of 518 patients experienced cutaneous irritation when a zinc-oxide paste containing 1% of crude coal tar and 0.5% of polyoxyethylene sorbitan monolaurate (Tween 20) was used.

Arch. Dermat. 72:266-270, 1955.



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MacQueen, J. C.: Nutritional Management of Some Common Intestinal Disorders. J. Iowa St. M. Soc. 40: 171, 1950.

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Grulee, C. G., and Eley, R. C.: The Child in Health and Disease. Baltimore, The Williams & Wilkins Co., ed. 2, 1952, p. 75.

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Gillespie, J. B.: Proctologic Problems of Infants and Children. Illinois M. J. 96: 371, 1949.



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How It Works: Promotes aciduric bacteria in colon. Grain extractives and potassium ions contribute to gentle laxative effect.

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The sustained effect of Acetycol is based on the relationship between aspirin and para-aminobenzoic acid. A relatively low dosage of aspirin produces high salicylate blood levels in the presence of PABA. The effectiveness of Acetycol in gout or cases of a gouty nature is due to the inclusion of salicylated colchicine.

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Each Acetycol Tablet contains:

Aspirin	325.0 mg.
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Thiamine hydrochloride	5.0 mg.
Niacin	15.0 mg.

Supplied: Bottles of 100 and 500

Acetycol

to relieve rheumatic pain

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Scleroderma and Dermatomyositis

G. B. DOWLING, F.R.C.P. Guy's Hospital, London

Although some symptoms and signs of scleroderma strongly resemble those of dermatomyositis, visceral involvement is characteristic of scleroderma but absent with dermatomyositis.*

The points of similarity between scleroderma and dermatomyositis are generally recognized, and the conditions are sometimes thought to be caused by the same morbid process. However, the anatomic changes with the disease frequently correspond only in the muscles and the skin.

Scleroderma is a progressive, generalized condition with many changes in internal organs as well as in the skin. Circumscribed scleroderma, or morphea, shows identical skin lesions without visceral involvement. The cause and pathogenesis of scleroderma are obscure.

Sclerodactylia, facial immobility, and telangiectasia are the most common skin changes. Pigmentation, patchy leukoderma, calcinosis, and Raynaud's phenomena are frequently seen. The face, neck, upper thorax, posterior surfaces of the upper extremities, and dorsal tendons of the hands and fingers are the most common sites of involvement. The lower limbs are less frequently affected.

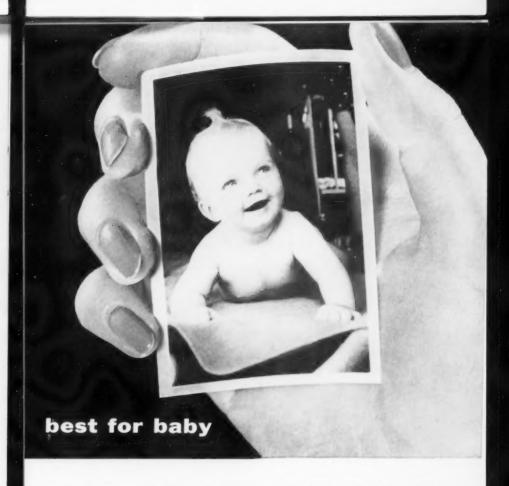
Gastrointestinal symptoms may precede the skin lesions. Dysphagia is a common symptom, and characteristic changes are seen on the esophagram. The bolus falls rapidly to the tracheal bifurcation or lower esophagus and then stops. The abnormal motility is most striking in the supine position and is probably due to lack of propulsive force. Swallowing is accomplished largely by gravity.

Abdominal symptoms include heartburn, belching, fullness, cramplike pain, nausea and vomiting, and distention. Dilatation of the small or large bowel may be seen on roentgenogram. Symptoms may suggest paralytic ileus. Histologically, the gastrointestinal tract, including the esophagus, shows atrophy of the muscularis, particularly the outer longitudinal layer.

Hyaline, acellular, or mucinous thickening of the arterial intima is common. Endarteritis confined to the intralobular arteries may be seen in the kidneys. Subintimal mucinous deposits appear. Multiple cortical infarctions result, and progressive oliguria, renal failure, and death may ensue in a few weeks.

Cardiac symptoms include exertional dyspnea, orthopnea, and cyanosis. Auricular fibrillation and other electrocardiographic abnor-

^{*}Scleroderma and dermatomyositis. Brit. J. Dermat. 67:275-290, 1955.



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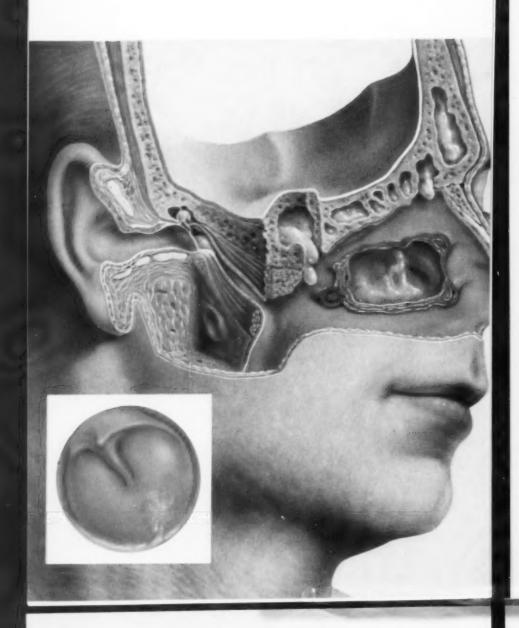
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'Ilotycin' is bactericidal. The great majority of throat cultures become negative within twenty-four hours. Complications are minimal.

Fully as effective against pneumococci as any other antibiotic.

The pneumococci-killing action of 'Ilotycin' is especially desirable in elderly patients and in debilitated states.

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DERMATOLOGY

malities are seen occasionally. Fluoroscopic study shows limited excursions. Capillary proliferation, vascular connective tissue, or scarring and fibrosis may be observed by microscopic study.

Myasthenia is a frequent symptom, and severe muscular weakness almost always accompanies cardiac involvement. Disintegration of fibers, loss of striations, and arrangement of the nuclei in close rows are noted in the skeletal muscles.

Dyspnea and pulmonary hypertension may result from changes in the lung. Chest films show increased markings, fibrosis, and small cysts in the periphery. Fibrosis, degeneration of small vessels, partial collapse, focal emphysema, and dilatation of the bronchioles may be seen on microscopic examination.

The skin changes with dermatomyositis are less characteristic than those with scleroderma. Erythema, often described as heliotrope in color, and edema of the face, especially the cheeks and eyelids, are characteristic of the early stages. Later, patchy pigmentation and depigmentation, atrophy, and telangiectases are noted. Some immobility of the features may de-

velop, but the tight, wrinkled mouth of scleroderma is not seen. Involvement of the scalp may result in permanent loss of hair.

The face, neck, upper thorax, and upper extremities are most frequently involved, and the extensor surfaces of the elbows, knuckles, knees, and other joints may show erythema, atrophy, scaling, and a fine vascular network. Muscular changes vary from slight weakness to extreme prostration. Raynaud's phenomena may occur. Although many of the features of dermatomyositis resemble those of scleroderma, visceral involvement is absent.

Dermatomyositis is frequently associated with visceral malignant disease. Cancer is 5 times as frequent in patients with dermatomyositis as in the general population. Malignant disease usually precedes cutaneous eruption. Death is due more often to dermatomyositis than to cancer. Treatment of the tumor is sometimes beneficial for the skin disease.

The course of dermatomyositis is variable. About half of the patients die in a period ranging from a few weeks to a few years. A fluctuating chronic course or complete recovery may occur.

TREATMENT OF MILIARIA RUBRA is facilitated by a lotion containing 5 mg. per cubic centimeter of neomycin (Mycimist). Col. Robert E. Lyons and Capt. John A. Hunt, M.C., U.S.A.F., of Lackland Air Force Hospital, San Antonio, observed that lesions completely cleared in 85% of 40 patients treated with the medicament, compared to 52% of 31 subjects treated with a lotion without neomycin.

J. Invest. Dermat. 24:557-560, 1955.

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Medical Forum

Discussion of articles published in Modern Medicine is always welcome. Address all communications to The Editors of Modern Medicine, 84 South 10th St., Minneapolis 3, Minn.

Emergency Resections of the Colon*

QUESTION: When is primary resection of the colon permissible for obstruction?

Comment invited from

CONDICT W. CUTLER, JR., M.D.
J. PEYTON BARNES, M.D.
WALTER L. MERSHEIMER, M.D.
C. R. MAINO, M.D.
ROBERT E. L. BERRY, M.D.
ARTHUR W. ALLEN, M.D.
CLAUDE J. HUNT, M.D.
RUPERT B. TURNBULL, JR., M.D.
IVAN D. BARONOFSKY, M.D.
CHESTER C. GUY, M.D.
PAUL NEMIR, JR., M.D.

▶ TO THE EDITORS: It is important to determine the type, cause, and duration of colonic obstruction. To determine whether or not resection is permissible depends fundamentally on its cause and the length of time obstruction has been complete.

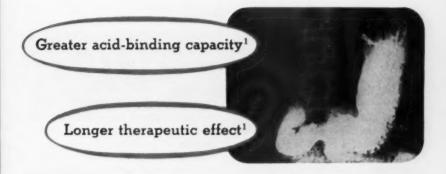
If the obstruction is of gradual onset and is nearing completion, there may be some instances, as Dr. Robert O. Gregg points out, in which resection can be done with safety. If, on the other hand, obstruction is complete, particularly if it is of twenty-four hours' duration or more, resection is permissible only when obligatory. I have in *Modern Medicine, Aug. 1, 1955, p. 101.

mind such a situation as gangrene of the intestine after volvulus, strangulation in a hernia or by peritoneal adhesion bands. All other types of acute complete obstruction would, in my opinion, be best treated by diverting colostomy, except in the case of a very ill patient, when cecostomy may be needed. I agree that except in such instances, full exploration is desirable.

Whether the obstruction is due to an inflammatory process or to neoplasm, there is almost certain to be a degree of associated local inflammation which will subside considerably when adequate diversion of the fecal stream is accomplished, thus permitting a safer, more satisfactory, and more definitive procedure at subsequent resection.

Fundamentally, the reason for objection to primary resection at the time of acute obstruction is that virtually none of the cases encountered fulfill Dr. Gregg's criteria of good general condition, suitable local condition, bowel of relatively normal size, absence of edema, and freedom from fecal masses. Almost every case of acute large bowel obstruction I have ever seen has failed to meet these criteria in greater or lesser degree.

CONDICT W. CUTLER, JR., M.D. New York City



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- Rossett, N.E., Rice, M.L. Jr.: An In Vitro Evaluation of the More Frequently Used Antocids, Gastroenterology 26:490 (1954).
- Merrison, Samuel: Magnesium Aluminum Hydroxide Gel in the Antacid Therapy of Peptic Ulcer, Am. J. Gastraenterology 22:309 (1954).

▶ TO THE EDITORS: Primary colonic resection in the presence of obstruction can be safely done more often when the lesion involves the right and transverse colon than when the descending and sigmoid sections are involved.

If a clinically malignant lesion of the right half of the colon is found at exploration when no definite diagnosis has been made, complete deflation and decompression of the entire proximal colon and small bowel will make resection and primary anastomosis a safe

procedure.

Lesions of the sigmoid and rectosigmoid create more difficult problems. Acute diverticulitis, with or without perforation, cannot always be differentiated grossly from malignancy. Perforation and abscess formation in acute diverticulitis present a marked local inflammatory reaction and usually create a rather large mass, but glands a relatively short distance away may be hardly palpable. With a malignant mass of comparable size, the regional glands are usually palpable, and here obstruction is nearly always more complete, with correspondingly greater proximal distention. With the first type, primary resection is permissible, provided, as Dr. Gregg stated, that the bowel ends are of relatively normal size and free of edema, with good blood supply and no large fecal masses in the proximal segment.

When the lesion is clinically malignant or proved so by examination and again no great amount of obstruction has developed, a primary resection is permissible.

When the proximal colon is greatly distended, I believe that a preliminary cecostomy or colostomy followed by a later resection is the safer procedure. In this way, resection of the malignant mass can be far more complete, and the number of cures will be correspondingly greater.

In recent years there has been much controversy about whether or not to drain in cases of ruptured appendix. It is my belief that the old adage "When in doubt, drain,"

is still a good one.

In all these situations involving obstruction in the colon, I believe that if there is any doubt as to whether resection without proximal decompression is safe, a vote should be cast for the patient's welfare and a proximal safety valve should be established.

J. PEYTON BARNES, M.D.

Houston

TO THE EDITORS: I would like to limit my discussion to generalized peritonitis secondary to perforation of malignant lesions of the colon. In a series of 21 cases reviewed by Dr. Edward Miller and myself, the perforation occurred at the site of the carcinoma 6 times more commonly than perforation through a segment of distended, but normal bowel proximal to the obstructing tumor (diastatic cecal perforation). The mortality rate from operative treatment of this lethal complication was 81% in our series and 78% in 19 surgical cases reported in the recent literature.

(Continued on page 186)

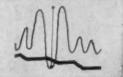
in bronchial asthma

objective

increase in vital capacity



Spirogram <u>before</u> Choledyl therapy. Note markedly diminished vital capacity.



Spirogram after Choledyl therapy. Note in particular 44% increase in vital capacity.

Based upon Dann, S., et al.: Internat. Rec. Med. & Gen. Pract. Clin. 167:265, 1954.

subjective

relief of patient suffering





Asthmatic (E.C.) before Choledyl therapy.

Patient (E.C.) after Choledyl therapy "less wheezing; chest less tight."

Based upon Dann, S., et al.: Internat. Rec. Med. & Gen. Pract. Clin. 167:265, 1954.

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dosage: Adults-initiate with 200 mg. q.i.d. preferably after meals and at bedtime. Adjust to individual requirements. Children over six-100 mg. t.i.d.

 Brown, E. A., and Clancy, R. E.: Presented at the Eleventh Congress of the American College of Allergists, April 29, 1955, Chicago, Illinois. To be published.

NOTE: Clinical reports on the efficacy of Choledyl in bronchial asthma and other indications are available on request.



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Adolescents need help to avoid vitamin C deficiency

Typical reports from nutritional surveys show: Among 780 junior high school students in Maine, two-thirds of the boys and one-half of the girls eat diets deficient in vitamin C.¹

Teen-age boys in Iowa neglect foods rich in vitamin C while girls stint on all foods to keep fashionably slim.²

Daily meals of students in four colleges of the Pacific Northwest provide inadequate vitamin C more than 60% of the time.³

The 'Citrus Snack' vs. 'Empty Calories'

The taste appeal of the 'citrus snack' 4 makes this a simple, satisfactory way to help compensate for the nutritional deficits of teen-age meals which are too often of "the hot-dog, soft-drink, candybar type." 6

Teen-age Acne Problems may be a manifestation of inadequate vitamin C intake, and excellent results have been reported by correcting this deficit.⁵

Florida Citrus Commission Lakeland, Florida



ORANGES - GRAPEFRUIT - TANGERINES

- Clayton, M. M.: Maine Agric, Exper. Sta. Bull. No. 495, 1951
- Eppright, E., et al.: Fed. Proc. 11:442, 1952.
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- Lakeland, Florida, 1934.
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 14:443, 1953; Am. Pract. & Dig. Treat. 5:658, 1954;
 A.M.A. Arch. Derm. & Syph. 70:363, 1954.

 Young, C. M., et al.: J. Am. Dietet. A. 27:289, 1951.

When perforation occurs in a segment of readily mobilized bowel, the neoplasm should be resected by an obstructive-resection procedure. In our opinion, primary anastomosis is not indicated. When mobilization cannot be accomplished readily, a loop or sigmoid colostomy should be performed above the lesion and drains inserted to the site of perforation. The lumen of the segment of colon between the colostomy and site of perforation should be cleansed as thoroughly as possible to prevent further contamination and all gross fecal particles should be removed from the peritoneal cavity. Cecostomy is not satisfactory as it does not divert the fecal stream completely; however, it may be indicated in coniunction with resection of the left colon when immediate decompression of tremendously dilated proximal loop is imperative.

In the rare instance of perforation through a carcinoma of the right colon, the procedure of choice in a good-risk patient is a right hemicolectomy and primary ileo-

transverse colostomy.

WALTER L. MERSHEIMER, M.D. New York City

▶ TO THE EDITORS: Primary resection of the colon in the presence of obstruction is gaining acceptance among surgeons formerly committed to stage procedures. Fifty years ago, colon resection with or without obstruction carried a prohibitively high mortality. Mikulicz' exteriorization and multiple-stage operations contributed to the lowering

of the mortality to 20% in thirty years. Recent advances in bio- and chemotherapy, physiology, blood replacement, and some progress in surgical technic and pre- and post-operative care have modified the earlier concepts of colon surgery, lowering mortality toward 5%.

Indications for primary resection of the colon are being expanded. Nevertheless, limitations are imposed by the obstructed colon. especially if the bowel is unprepared. For the fortunate patient with the advantage of accurate investigation and bowel preparation, primary resection and anastomosis are apt to be no more hazardous than stage procedures. Not so fortunate is the patient who arrives in the operating room as an emergency, with inaccurate evaluation, and a distended, unprepared bowel teeming with virulent organisms. This patient is a candidate for a stage procedure that will at once relieve the obstruction and isolate his vulnerable peritoneum from organisms which will inevitably escape with anastomosis.

Preliminary proximal colostomy may allow an inflammatory process, with or without associated neoplasm, to subside and may convert an impossible or hazardous circumstance for primary resection into one that can be handled with relative ease and safety later. Early obstruction may be treated by primary resection, but to attempt anastomosis of a hugely distended, paper-thin colon is unwise. The wall may be friable, thinned to transparency, and the quality of the

(Continued on page 190)

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anastomosis doubtful. In perforating wounds with considerable soiling, when abscess complicates obstruction, primary resection should usually be abandoned.

Expediency in other situations may require proximal colostomy or exteriorization in preference to a more traumatic and time-consuming resection. The patient who is found to have an obstructing neoplasm of the colon and liver metastasis presents a special problem. Here, even though risk may be increased by primary resection, it is usually preferable to colostomy.

C. R. MAINO, M.D.

Modesto, Calif.

▶ TO THE EDITORS: Dr. Robert O. Gregg's observations on the place of early definitive resection in certain obstructive and perforating lesions of the colon are indicative of the continuing aggressive and imaginative surgical approach to lesions of the colon that has characterized the past fifteen years. He is to be congratulated upon his results. Furthermore, he has wisely pointed out the limitations of these procedures.

Obstructions of the colon with minimal fecal stasis and without marked distention of the colon have been successfully treated with early definitive resection by many surgeons. When marked colon distention and fecal stasis occur, and particularly when there is attendant small bowel obstruction secondary to an incompetent ileocecal valve, it is not unreasonable to suggest that the majority of surgeons with considerable experience in colon

surgery would prefer to obviate the obstruction by initial decompression. Certain cases of acute perforation of the colon secondary to ruptured diverticulas are also amenable to early primary resection.

With diffuse inflammatory involvement of the sigmoid colon from its junction with the rectum to the descendens, the routine use of primary resection will be complicated by anastomotic leaks and colon fistulas. I have operated on a number of patients with such fistulas after unwise resection of an extensively inflamed colon.

The routine use of early definitive resection for these lesions is, therefore, unwise. The number of such cases that can be successfully treated in this manner depends upon the experience, judgment, and clinical acumen of the attending surgeon. Because these variables may be considerable, reasonable doubt as to the advisability of primary resection in a given case is contraindication enough. Careful weighing of all considered factors should be accomplished before such emergency primary resections are undertaken.

ROBERT E. L. BERRY, M.D. Ann Arbor

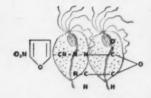
To the editors: I am perfectly certain that if the above question were asked in a panel discussion, most surgeons would be inclined to say "Never." There are a few exceptions, one has to admit, but these are certainly rare.

Primary resection is usually a (Continued on page 194)

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term used when one plans a definitive procedure such as the elimination of all diseased bowel plus the lymph node spread in its fullest extent. Nowadays, primary resection is almost invariably associated with primary end-to-end anastomosis except when the entire rectum is removed for a tumor low down in the large bowel or in the rectum.

In the days when the exteriorization procedures of Bloch, Paul, and Mikulicz were popular, more attempts were made to do an extirpation of the primary lesion, even in the presence of obstruction, than is common today. Rankin developed a very excellent technic for this, decompressing the proximal segment of the bowel with a small catheter at the time of the exteriorized resection, and leaving his clamps in place until the bowel was well fixed in the abdominal wall.

In obstruction of the colon there may be an acute perforation which may be best handled by drainage and a proximal decompression colostomy. This delays the primary resection, but primary resection with obstruction carries a greater risk than if operation can be staged. Possibly in cases of very early obstruction, one might consider a primary resection but rarely, if ever, can a primary resection under these circumstances be followed by immediate anastomosis. The inflamed bowel of the proximal segment, due to the distention from the obstruction, does not lend itself well to suturing or to healing at the anastomosis.

Probably the condition for which

primary resection would be most commonly indicated is a cecal or ileocecal valve lesion, particularly with intussusception, when the obstruction has not existed for a very long time. One might apply this rule to volvulus at a time when the blood supply of the segment is questionable.

My own opinion is that one should stress staged operations in the presence of obstruction, and look upon a curative type of operation as a secondary or even a tertiary approach to the problem. If one follows this rule, the mortality rate will be extremely low, whereas if one is tempted to do the definitive operation in the presence of obstruction, one is bound to have a decreased salvage rate.

ARTHUR W. ALLEN, M.D.

Boston

TO THE EDITORS: Only on a clean, nonobstructed colon can primary resection and anastomosis be done safely. Open anastomosis is preferred. It permits meticulous placement of sutures and insures a good lumen without undue infolding of bowel ends. Peritonitis results, not from an open anastomosis in a properly prepared bowel, but from leakage due either to tension upon the suture line or to a devitalized area resulting from a compromised blood supply.

In contrast to obstruction of the small bowel, colonic obstruction presents a complication which prohibits a primary attack on the lesion. With colonic obstruction, the problem is to decompress the co-

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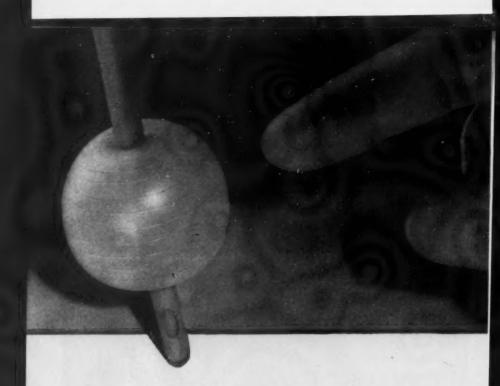
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lon and prepare it for subsequent resection of the lesion, while with obstruction of the small bowel surgical intervention is directed primarily at removal of the lesion. It is not only with acute obstruction of the colon that decompression is desired; in all cases of chronic obstruction of the left side of the colon, preliminary decompression of the proximal portion of the bowel is indicated.

Lesions in the left side of the colon usually are annular and constricting in character and at the time of consultation a variable degree of obstruction is frequently found and in a few cases complete obstruction.

Fortunately, most obstructions are not actually complete but are in part due to edema, inflammatory reaction, and invaginated mucous membrane. With proper surgical decompression and by means of irrigations, the obstruction will relent sufficiently to permit the colon to empty itself partially through the distal segment. This materially aids the thorough cleansing of the colon.

Cecostomy as the preferred measure of decompression of the acutely obstructed colon is controversial. Cecostomy as it usually is done, with a catheter held with a pursestring suture in the cecum and the cecal wall sutured to the parietal peritoneum, functions only as a vent for the escape of gas. Irrigations and bowel preparation cannot be done through a small opening in the cecum fixed to the parietal peritoneum and connected to the outside by a fecal fistula. It is not a cecostomy—it is a cecal fecal fistula.

A similar technic used upon the right colon for the same reason would be equally ineffective and also in like manner a colonic fecal fistula. It would be of no service as an avenue to irrigate and clean the bowel. A cecostomy that is comparable to a colostomy with a large outside stoma, as a colostomy has, is adequate for thorough irrigation and is much easier to close subsequently. The lumen is large, the approach is easy, omental attachments are not present, and edema and induration will not be sufficient to obstruct the lumen, as may occur in colostomy closure.

Our cecostomies are made like colostomies, with a large cone of cecum delivered to the outside providing an adequate external opening for drainage and for irrigation. The bowel is not sutured to the peritoneum or to the abdominal wall since it readily adheres to these structures. Edema of the protruding segment of cecum in a few hours prevents the bowel from retracting into the abdomen. Our cecostomy clamp retains it outside until this swelling and edema occur. The clamp is removed in forty-eight to seventy-two hours. This is truly a functioning type of cecostomy and has advantages comparable and in many instances superior to a colostomy.

We believe that this type of cecostomy is the best procedure for decompression of the acutely obstructed colon for the following reasons:

1] With acute obstruction of the colon the most distensible part of (Continued on page 200)



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the colon is the cecum. It is the segment that in time may perforate. This will occur when the intracecal pressure becomes greater than the

systolic blood pressure.

21 A surface cecostomy with a good stomal opening permits decompression of the colon and releases the intracolonic pressure at the site of the neoplastic obstruction, as well as a colostomy. Edema and induration subside, and the bowel at the site of the neoplasm again becomes partly patent. With the release of these associated agents of obstruction, edema, and induration, the bowel may be irrigated and thoroughly cleansed by enema and cecal irrigations. In no instance is it impossible to thoroughly cleanse the bowel and prepare it for satisfactory subsequent resection when the cecostomy has a good open stoma presenting upon the surface of the abdomen.

3] The distended cecum is the most accessible segment of the large bowel for surgical decompression. It in no way interferes with the extensive resection which is often required for lesions of the left

colon.

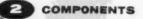
4] Decompression of the right colon adds little to the solid character of the fecal discharge and contributes only little to the thoroughness of subsequent colon irrigations and cleansing of the lower colon. The mechanics are the same. The colon is equally decompressed and the edema and induration at the obstructive site will subside, patency of the bowel will be reestablished, and through-and-through irrigation from rectum to surface

cecostomy opening can be accomplished as well as it can with a right colon colostomy.

5] The right colon is hard to approach surgically and decompress when distended. It delivers poorly, due to omental and mesenteric attachments.

6] A right colostomy imparts no information relative to the viability of the cecum, which may contain areas of devitalization which would be unknown to the surgeon at the time of right colostomy. If present, they will perforate even though a successful right colostomy has been done.

Most undesirable is the fact that a right colostomy materially interferes with the extensive mobilization often necessary for radical resection of left colon lesions. Left colectomy with contemplated anastomosis of the right transverse colon to the lower sigmoid or rectosigmoid is difficult or impossible to accomplish when a right colostomy is present. This procedure is being advocated more and more. as it is frequently surgically indicated for radical extirpation of gland-bearing tissue. In such instances it usually is necessary to mobilize the hepatic flexure for adequate anastomosis without tension. This cannot be done when a right colostomy is present. This can be done easily with a cecostomy. Why, then, handicap future surgical procedures by a colon decompression which restricts extensive resection, mobilization, and secure anastomosis? Especially is this objectionable when decompression and adequate colon preparation for subsequent



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surgery can be done by a well-performed surface eccostomy.

We, therefore, believe that a cecostomy with an adequate skin surface stoma is preferable to colostomy for decompression of the acutely obstructed left colon due to intrinsic malignant disease.

CLAUDE J. HUNT, M.D. Kansas City, Mo.

▶ TO THE EDITORS: Resection of the colon with immediate anastomosis rarely is indicated for treatment of obstruction of the colon, and we believe that in most instances the procedure actually is unsafe. Early obstruction has been listed as one of the conditions in which primary resection with anastomosis probably is advisable. If bowel movements have ceased and the colon is distended, the obstruction is not early and emergency resection is not indicated.

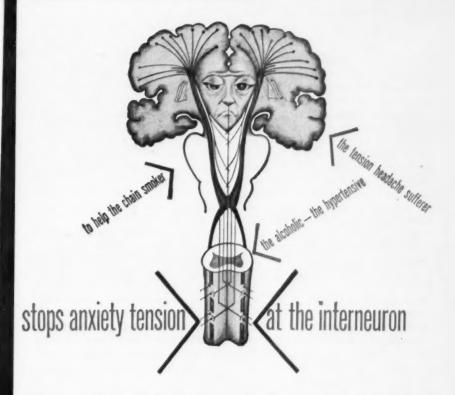
Early or acute obstruction of the colon because of carcinoma is not as acute as it appears. The colon has responded to the increasing obstruction of a slow-growing lesion by proximal muscular hypertrophy and resultant increased thrust of fecal masses through the narrowed portion. At some point the maximum ability to overcome obstruction is reached and the colon decompensates and dilates rapidly. Thus, obstruction has been in progress for some time, although clinical signs have been present for only a few days to a week.

In view of the above events, Dr. Gregg's criteria for immediate resection and anastomosis rarely can

be met. The proximal end of obstructed bowel is dilated, thick walled, edematous, and ordinarily filled with feces; all are contraindications for a primary operation. In addition, tissue tension and vascularity are markedly increased, and both are instrumental to the spread of cancer through the lymphatic and venous channels. Moreover, mobilization of dilated bowel requires extensive handling. The colon dilates between the leaves of its own mesentery, becoming shorter and less mobile and its primary blood vessels become less available to the surgeon who utilizes a preliminary vascular bundle ligation technic.

Patients with colonic obstruction and those with peritoneal soiling from a free perforation belong in separate categories of treatment; the former are not in immediate danger of losing their lives, the latter are. Tube cecostomy is a simple method of decompressing the colon, which relieves back pressure of fluid and gas but not feces. It is followed in a few days by bowel movements, with emptying of the colon. The vent closes spontaneously after the tube has been removed. When transverse colostomy is used instead, an additional operation, with its attendant risks and expense, must be performed for closure.

One of the commonest mistakes is to treat a free perforation of the left colon by transverse colostomy. When possible, it is preferable to exteriorize the perforation, whether inflammatory or traumatic. When it is low, colostomy should be done



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as close to the perforation as possible and the perforation site should be drained. Free perforations caused by cancer are rare.

We agree with Dr. Gregg that primary resection with anastomosis is indicated when [1] nonviable bowel is present, and [2] there is an obstructing lesion of the right side of the colon with a competent ileocecal valve or a lesion involving the ileocecal valve. However, we have found these conditions to be rare in clinical practice.

RUPERT B. TURNBULL, JR., M.D. Cleveland

▶ TO THE EDITORS: Dr. Gregg has written a very timely article on the treatment of large bowel obstructions. That there is a place for primary resection in obstructive lesions of the large bowel is evidenced by his superb results. He is to be congratulated. We have also performed primary resections in certain instances.

Using the criteria that were formulated in the article by Dr. Gregg, it would be possible to resect primarily more obstructing lesions than has been possible in the past. A surgeon with good experience in bowel surgery in a hospital with modern laboratory and nursing facilities will be able to carry out the suggested procedures with a very low mortality. However, it is to be emphasized that for certain lesions, such as left-sided colon and cancers with distention. the less experienced surgeon would be wise to colostomize the proximal bowel.

Right colon lesions up to the midtransverse colon should be resected primarily. All resections should be performed only after adequate decompression of the bowel. Useful adjuncts in this regard are the aseptic decompressive enterotomy as described by Wangensteen and the passage of a stilet-guided catheter into the bowel at the time of exploration. Occasionally it may be possible to manipulate a rectal tube up through the obstruction from below and thereby relieve the obstruction, allowing for primary resection. Another aid may be the placing of 1% neomycin into the bowel lumen prior to excision, as suggested by Poth. This will effectively decrease the bacterial concentration within the lower bowel. The placement of a long intestinal tube just proximal to the anastomosis has also proved effective in certain cases.

No doubt Dr. Gregg will find antagonists to his suggestions; however, it is my feeling that if his criteria are followed, excellent results will be obtained by the trained surgeon.

IVAN D. BARONOFSKY, M.D. San Diego

TO THE EDITORS: The term primary resection is now used by many to refer to the removal of a segment of colon with anastomosis of the bowel to restore continuity. In the minds of others it refers to a resection of a segment of colon at the first operation but without anastomosis, the two bowel ends be
(Continued on page 208)

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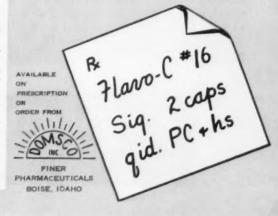
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 Alt, H.L.: Anemia (Chronic Iron Deficiency), in Conn. H.F.: Current Therapy 1952, W. B. Saunders Co., p. 200.

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ing brought out of the abdomen either together or in separate locations. When brought out together with clamps applied to each end, the operation should be referred to as an obstructive resection, as described years ago by Rankin.

In my opinion, primary resection with anastomosis is permissible in obstructive lesions of the colon:

 When the obstruction has been incomplete and a reasonably adequate preoperative preparation has allowed rather thorough emptying of the proximal colon and has permitted the use of intestinal antiseptics for two to four days.

 When the obstruction is in the right colon and there is a competent ileocecal valve. In such cases, the terminal ileum is dilated little, if any, and an ileocolostomy after removal of the right colon is feasible even though the patient has not been adequately prepared.

• When the obstructive lesion appears to be of inflammatory origin and there has been adequate preoperative preparation.

• In the exceptional acute case of a perforated inflammatory lesion, such as a perforative diverticulum of the sigmoid, when the proximal colon is healthy and contains only liquid stool and when there is enough healthy distal colon to permit accurate anastomosis.

An obstructive resection should be done for obstructing lesions of the colon:

 When the obstruction is due to carcinoma of the left colon and it is possible to remove a wide segment of the colon together with adjacent mesentery and still permit

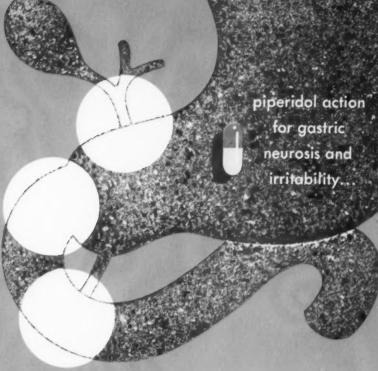
double-barreled colostomy in those patients who have been inadequately prepared and/or when there is marked dilatation with fecal retention in the proximal colon. When the carcinoma and the mesentery cannot be widely resected, it is much better to do a transverse colostomy. The obstructive resection is a perfectly good operation for obstructing left colon carcinoma provided the surgeon can do as wide a resection as he would do in a patient properly prepared. An obstructive resection is not advisable for carcinomas or inflammatory lesions of the right colon as such patients do not do well with an ileostomy. An ileocolostomy is preferable in such cases and is followed by an elective resection of the right colon.

• In obstructing inflammatory lesions (diverticulitis) of the sigmoid colon with or without abscess formation when the proximal colon is dilated or improperly cleansed and when the mesentery is markedly edematous. If it is impossible to resect the involved segment and have sufficient distal bowel to bring to the abdominal wall or to permit safe anastomosis, it is preferable to perform transverse colostomy and a resection at a secondary stage.

I cannot agree with Dr. Gregg that resection and primary anastomosis should be done when obstruction has progressed to the point of imminent or actual cecal perforation unless he is referring only to obstructing carcinoma of the right colon.

CHESTER C. GUY, M.D.

Chicago



visceral eutonic

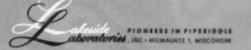
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relieves pain and spasm usually in 10 minutes

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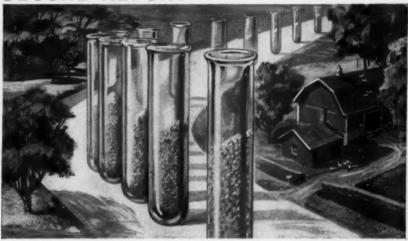
1 tablet t.i.d. before meals, and 1 or 2 tablets at bedtime.

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SECOND REPORT



LECITHIN RESEARCH-AT THE BEND OF THE ROAD

The Therapeutic Usefulness of Lecithin - a natural phospholipid

Because lecithin, a natural, edible food constituent, is an excellent emulsifying agent its application in diseases characterized by disturbed fat absorption and metabolism is logical. Research has proved its value in facilitating intestinal absorption of fats and fat-soluble substances such as vitamin A.¹⁻⁵ For this reason it suggests itself as worthy of trial in treating underweight and steatorrheal diseases (sprue, celiac disease, etc.).

Encouraging results were also achieved in the management of psoriasis, together with dietary and topical measures, and in fatty livers. In the treatment of diabetes, lecithin together with vitamin E has reduced insulin requirements in certain patients. Research on its potentially useful role in the more complicated forms of deranged lipid and cholesterol metabolism — as encountered in essential hyperlipemia, idiopathic familial hypercholesteremia, xanthomatosis, diabetes, etc. — is now being actively conducted.

An excellent source is Glidden's "RG" Oil-free Soya Lecithin, a highly purified extract containing a minimum of 95% phospholipids. It is packed in a specially designed 8 oz container to maintain its purity and freshness and is available at your drugstore.

Dosage: Investigators of lecithin have used quantities from 7.5 to 30 grams daily in divided doses. (3 teaspoonfuls equal 7.5 grams.)

Administration: "RG" Lecithin is presented in palatable granules which may be taken plain, in milk, in orange juice or other citrus juices, or sprinkled on cereal.

Literature available on request.

Bibliography: 1. Adlersberg, D., and Sobotka, H.; J. Nutrition 25:255 (March) 1943. • 2. Adlersberg, D., and others: Gastroenterology 10:822 (May) 1948. • 3. Adlersberg, D.: New York J. Med. 44:806 (March 15) 1944. • 4. Adlersberg, D., and others: Am. J. Digest, Dia. 16:333 (Sept.) 1940. • 5. Augur, V.; Rollman, H. S., and Deuel, H. J., Jr.: J. Nutrition 33:177 (Feb.) 1947. • 6. Gross, P., and Kesten, M. B.; New York J. Med. 50:2633 (Nov. 15) 1950. • 7. Schettler, G.; Klin. Wehnschr. 30:627 (July) 1952. • 8. Dietrich, H. W.: South, M. J. 43:743 (Aug.) 1950.

GLIDDEN RG°LECITHIN

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TO THE EDITORS: The management of obstruction of the large intestine will depend in large part upon whether the obstruction is complete or partial. Complete obstruction of the colon may be acute in nature, as in the case of a sigmoid volvulus. The diagnosis of this disorder may be readily apparent if one has it in mind when reviewing the survey film of the abdomen. The method of management in this situation obviously concerns itself with the immediate relief of the obstruction and the twist or torsion of the mesentery before compromise of the blood supply has occurred.

Certainly in these cases operation should be carried out at the earliest possible time. Whether resection is done at the time of operation will depend upon a number of factors. If the bowel wall has become gangrenous, resection of the involved segment is, of course, mandatory. If the bowel both above and below the volvulus is of essentially normal caliber and thickness, then primary anastomosis may be done. If a marked discrepancy exists between the proximal and distal colon segments, the loops may be brought out as a double-barreled colostomy with reestablishment of intestinal continuity at a later date. If impending perforation or gangrene is not present at the time of operation, the decision between a resection with anastomosis and a Rankin obstructive type colostomy will depend upon the character of the two segments of sigmoid to be anastomosed.

The vast majority of complete

obstructions are those of cancerous involvement of the left side of the large intestine. Frequently, in these cases, obstipation has been present for five to ten days or more with almost complete obstruction for a much longer period. This frequently results in an extensive amount of edema that may involve a large segment of proximal colon.

The napkin-ring lesion is friable, and when great distention is present, the mere handling of this segment of bowel may result in separation at the area of constriction with consequent gross spillage. The great amount of contamination, although possibly controlled by antibiotics, does not represent sound surgical principles.

In cases of complete obstruction of this nature, we feel rather strongly that a decompressive procedure, rather than any effort at primary resection, should first be carried out. When confronted with such a situation, our policy has been to perform a stransverse colostomy preferably, or a cecostomy if necessary, because of the position of the lesion. It is generally possible, within ten days of the decompressive procedure, to again operate upon the patient and resect the obstructed segment. While it is true that this method of management necessitates three operations—proximal decompression, resection and restoration of continuity when possible, and closure of the proximal colostomy-we feel that it is by far the safest method.

In a review of the cases of intestinal obstruction at the Hospital of the University of Pennsylvania for



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the ten-year period 1940-50, while the number of cases was not statistically significant, there was, nevertheless, evidence that mortality was higher when resection and anastomosis were done in the presence of complete obstruction of the colon. The management for partial obstruction of the large bowel differs from that for complete obstruction. Obviously, if the three operations previously mentioned could be shortened to a single procedure in which the involved segment of bowel is resected and intestinal continuity restored, it should be done.

If the obstruction is in the rectum, rectosigmoid, or lower sigmoid, it may be possible on proctoscopic examination to pass a large catheter beyond the obstruction, thus aiding in relieving the distention. While it is of course true that a long intestinal tube is of no benefit in directly decompressing the large intestine, it will nevertheless be useful in relieving an existing small bowel distention. Our purpose in the partial obstructions, therefore, is to attempt to relieve the existing distention by conservative means and, at a subsequent time of election, three to five days or more if necessary, to carry out a primary resection of the obstructing lesion and restore intestinal continuity. It must be remembered that at any time during the conservative management, the distention may so increase that a decompressive procedure will be necessary as an emergency.

It is our own feeling that primary resection of an obstructed colon is permissible in only rare instances. It may be indicated, as mentioned, in cases of volvulus and also in the occasional case of ulcerative colitis with extreme distention of the entire colon and the danger of impending or actual perforation of the cecum. In the vast majority of instances, however, and particularly in those with obstruction of the left colon, decompressive procedures should be carried out before any attempt at resection of the obstructing lesion.

PAUL NEMIR, JR., M.D. Philadelphia

Exploration of the Postpartum Uterus*

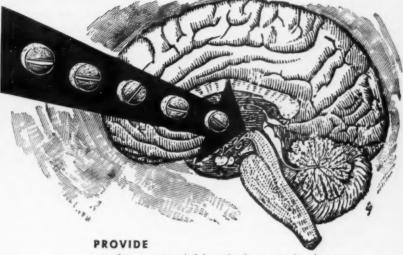
QUESTION: When should manual exploration of the postpartum uterus be done?

Comment invited from
EDWARD G. WATERS, M.D.
HUGH HALSEY II, M.D.
DONALD W. DE CARLE, M.D.

► TO THE EDITORS: Postpartum intrauterine examinations probably originated with the first really inquisitive tribal medicine man. That they have been in disrepute from Semmelweis' time until recently is readily understandable. Many of the accidents or inflictions of delivery were doubtless and in much error ascribed solely to the intrauterine postpartum hand, rather than to what went on before.

Although modern technic, antibiotic therapy, blood replacement, good anesthesia, and systemic support have been part of our medical acts and thinking for many years *Modern Medicine, July 15, 1955, p. 108.

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Anxiety, abnormal dread or fear, discouragement, gloom, depression, nervousness

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Sensation of hunger, thereby lessening tendency to overeating

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now, in no texts on obstetrics will be found [1] positive advice to make routine intrauterine examinations post partum in all suspect cases or [2] a word on the simple but important methodical technic involved. The common serious postpartum threats are birth tract injuries, notably cervical lacerations and uterine rupture, retention of placental remnants, partial or complete placenta accreta, uterine inversion, uterine tumors and malformations, and, rarely, in the absence of others, uterine atony.

Every one of these can be detected by a vaginal and intrauterine examination conducted under anesthesia, with good light, good assistance, and the ordinary intelligence required to look and feel for the pathologic possibilities enumerated above. For some years this supposedly has been an established procedure in our own hospital, yet the failure to carry through completely produced one heroic postpartum hysterectomy for a lower vaginal laceration. Before the smug snicker of the reader becomes audible, I say, "Look to your own records." The advice given by Drs. Simon Duckman and Phillip Dennen is good advice, but it will be no more than that unless carried through to its rational end. This sort of advice should be incorporated into medical school obstetric teaching, and medical students, as well as the older products of the uterine noli me tangere era, should be instructed in the actual routine. It will lower loss of lives, not to mention uteri.

EDWARD G. WATERS, M.D.

Jersey City

To the editors: Manual exploration of the postpartum uterus need not and should not be performed as a routine procedure. There is an increased danger of puerperal infection after any intrauterine manipulation at delivery which can be serious in view of the increasing bacterial resistance and patient sensitivity to some of the antimicrobial drugs. When indicated, however, it should be done without hesitancy.

Exploration of the fundus is done principally to assure oneself that placental fragments have not been left behind, that the uterus has not been damaged, or that inversion has not occurred. It is indicated after manual removal of the placenta or after difficult expression of the placenta, particularly when the placenta is torn or fragmented. It should also be performed, along with inspection and palpation of the vagina and cervix, in the presence of unusual or unexplained postpartum bleeding. It should be done after any difficult delivery, such as midforceps or version, when injury to the uterus or lower segment may occur.

Elective exploration may be done to palpate the uterine scar in a vaginal delivery after a previous cesarean section or to detect a uterine abnormality after a premature delivery or abortion.

When time permits, the strictest aseptic precautions should be taken, including repreparation and redraping of the patient, clean gown and gloves for the doctor, as well as a version cuff.

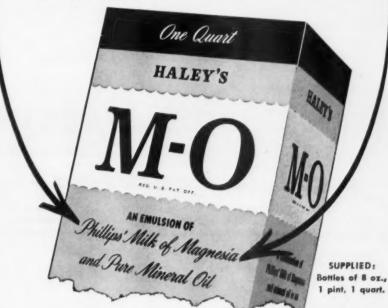
(Continued on page 218)



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87 per cent of patients improved

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Reference: Hughes, W. M., Dennis, E., and Moyer, J. H.: Am. J. M. Sc. 229:121 (Feb.) 1955.



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MEDICAL FORUM

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Prophylactic antimicrobial agents should be used if aseptic technic was deficient or postpartum hemorrhage has occurred.

Deep anesthesia is usually necessary in order to introduce the whole hand into the uterus. This maneuver is not required after the placenta is out, because, with one hand in the vagina and the other on the uterus abdominally, the fundus can be explored for fragments with the fingers of the vaginal hand and the lower uterine segment palpated for

HUGH HALSEY II, M.D.

Glen Cove, N.Y.

tears.

TO THE EDITORS: It is my opinion that whenever trouble may stem from the uterine cavity, either during or after the third stage of labor, one should not hesitate to manually explore the uterus immediately.

That exploration of the uterus today is not only a safe but may even be a lifesaving procedure should be constantly borne in mind by the obstetrician. The introduction of antibiotics to our armamentarium is the main reason why this procedure has been incorporated as one of the modern methods in obstetric practice. Thus, when examination of the placenta suggests missing secundines or a cotyledon, one no longer hesitates to explore the uterine cavity for the missing tissue. Antibiotics combined with



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Sandoz PHARMACEUTICALS HANOVER, N. J. proper technic have removed the danger of infection and removal of the missing tissue has averted or minimized the danger of a postpartum hemorrhage.

As Drs. Simon Duckman and Phillip Dennen pointed out, early recognition of a uterine rupture or severe cervical laceration through manual exploration of the birth canal may well be lifesaving. Also, manipulation of the atonic uterus has become a valuable adjunct in combating postpartum hemorrhage, whereas even five or ten years ago it was assiduously avoided as being a definitely dangerous procedure. It has been found to be sufficiently effective, especially when used with intravenous administration of Pitocin, to obviate intrauterine packing in an increasing number of cases.

Routine manual exploration of the uterine cavity at the time of cesarean section is another procedure I heartily endorse. In two instances in the past to my knowledge, such a routine would have avoided serious complications. Retention of a lithopedion in one patient and of a succenturiate placenta in another could have been avoided if this procedure had been utilized. Such a routine gives further knowledge to the operator of any other intrauterine lesions.

Like any other procedure which is comparatively new and found to be completely safe, however, it can be abused. Routine manual removal of the placenta immediately after the second stage of labor as advocated by Hoffman and others is too radical, in my opinion. If, however, delivery of the placenta is delayed, then I know of no reason why this physiologic function should not be facilitated by intravaginal, intracervical, or intrauterine manual manipulation.

DONALD W. DE CARLE, M.D. San Francisco



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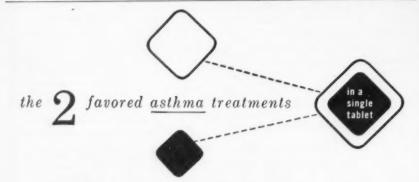
Life's Weary Moments

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T. M. Fletcher, M.D. St. Louis

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222 MODERN MEDICINE, November 15, 1955



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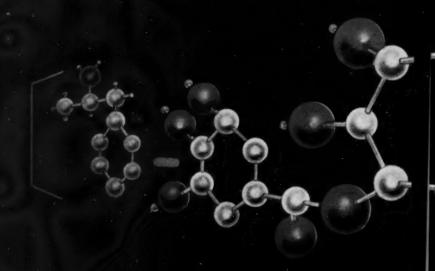
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Suppositories

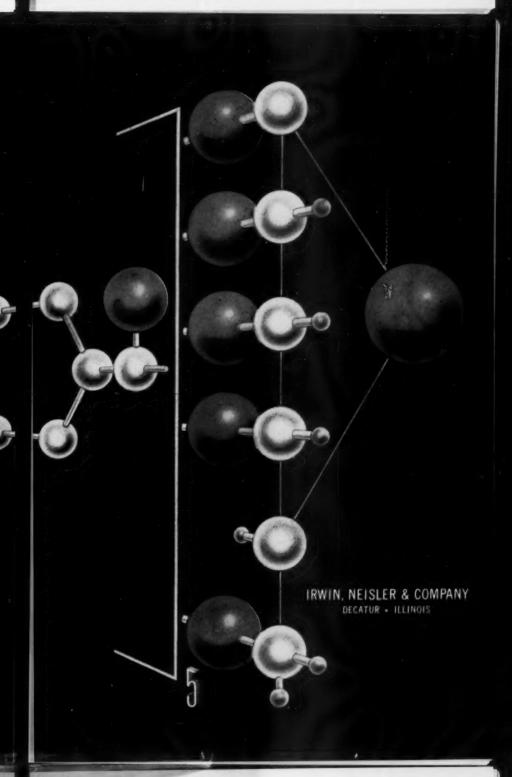
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Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-299

THE CLUE

ATTENDING M.D: I would like to have you see a 63-year-old man with anemia of unknown etiology. The anemia is chronic, has probably existed for six months or more, and seems to be due to occult gastrointestinal bleeding. However, we cannot locate the source of hemorrhage despite very thorough examination.

VISITING M.D. Why do you think the gastrointestinal tract is the

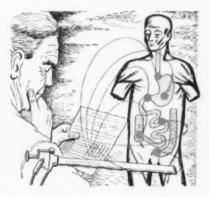
source of bleeding?

ATTENDING M.D: Well, he is an adult male, the anemia is hypochromic, and several stool examinations have contained blood by

the guaiac test.

VISITING M.D: You are right in including gastrointestinal bleeding in the differential diagnosis. Even if guaiac tests are negative, gastrointestinal bleeding should be suspected when a man has irondeficiency anemia. Cancer, until proved otherwise, is a pretty good dictum in such cases.

ATTENDING M.D: Well, I'm beginning to feel that we have proved otherwise in this patient. Gastroscopic, radiologic gastrointestinal, and sigmoidoscopic examinations were all negative.



visiting M.D. Yet stools have been repeatedly positive for occult blood and the anemia is hypochromic. Any signs of telangiectases or varices?

ATTENDING M.D: I thought of hereditary hemorrhagic telangiectasia, but neither I nor the endoscopist could see dilated vessels on the skin or mucosa. The bromsulphalein test was 6% in forty-five minutes.

PART II

VISITING M.D: Any bleeders in the family?

attending M.D. No, and his bleeding, clotting, and prothrombin times are normal. He has never had previous bleeding or bruising. I believe that the bromsulphalein result eliminates cirrhosis.

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CEREALS, STRAINED & JUNIOR FOODS

DIAGNOSTIX

VISITING M.D: I agree. It is unlikely that cirrhosis severe enough to cause varices would permit the bromsulphalein to remain so low. Of course, there are other causes for esophageal and gastric varices, such as thrombosis of the portal vein, but I presume the roentgenologist looked for them carefully. Was an esophagoscopic examination done?

ATTENDING M.D: Yes, but only after the other gastrointestinal studies were negative. No esophageal lesion was seen.

VISITING M.D: What is the patient's story?

ATTENDING M.D: The only symptoms are those attributable to anemia. He has had progressive weakness and easy fatigability for about six months, with dyspnea from exertion and slight angina on effort.

VISITING M.D.: No dyspepsia or bowel symptoms?

ATTENDING M.D: None. Bowel function is unchanged, and the stool is normal, though the patient hasn't watched too closely for color. His appetite is not as good as usual, and he has lost 15 lb. in the last six months.

VISITING M.D: No other symptoms?

Does the man have any abdominal pain?

ATTENDING M.D: No, he has none. Would you like to examine the patient?

VISITING M.D: Yes. (They enter the patient's room.)

PART III

ATTENDING M.D: (Later, in the corridor) Don't you think he is in good condition except for ane-

VISITING M.D: Yes, he seems to be.

I noted pallor of the mucosa and palmar creases. What is the hemoglobin level?

ATTENDING M.D: The hemoglobin is 7 gm. I haven't ordered a transfusion because the patient is comfortable while in bed. What else did you see?

VISITING M.D: I examined him for atrophy of the tongue; lymphadenopathy; hepatosplenomegaly; scleral icterus; spider nevi; telangiectases of the face, lips, or oral mucosa; petechiae; goiter; palpable kidneys; abdominal mass; and signs of vitamin deficiency. There was a grade II systolic heart murmur at the



"Can you speed it up, Doc? My car's double parked."



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DIAGNOSTIX

apex. This is probably due to anemia, but a blood culture should be done.

ATTENDING M.D: That was done before and was negative. He has been afebrile, and the leukocyte count is normal.

VISITING M.D: The abdominal examination wasn't conclusive, as the man is obese and the abdominal wall relaxed poorly. What other tests have been done besides the complete gastrointestinal study?

ATTENDING M.D: Leukocyte and differential counts are normal. Serologic reaction was negative, and the urinalysis was normal. The nonprotein nitrogen was 36 mg. per cent, and plasma proteins were normal. Since myx-

edema can cause anemia, we determined the basal metabolism rate and total cholesterol. Both were normal. Fecal urobilinogen was 100 Ehrlich units per 100 gm. The chest film was also negative.

VISITING M.D: What did the blood smear reveal?

artending M.D. Normal white cells and a hypochromic microcytic anemia. Bone marrow examination showed deficient iron stores and some crythroid hyperplasia.

PART IV

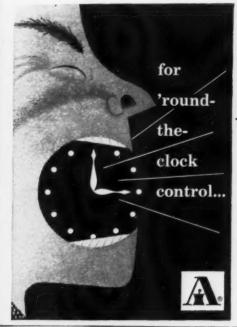
VISITING M.D: The repeatedly positive guaiac tests cannot be disregarded. Despite the thorough and negative endoscopic and (Continued on page 236)

In
peptic
ulcer
and
other
G-I
disorders

Relieves Anirany Allays

C I B A

0/214296



of even obstinate hacking coughs

TUSSAR quiets ... soothes

Tussar contains a superior antihistamine-prophenpyridamine maleate-and dihydrocodeinone bitartrate, approximately 6 times more potent than codeine. This means cough sedation with much smaller dosage.

THE ARMOUR LABORATORIES A DIVISION OF ARMOUR & COMPANY - KANKAKEE, ILLINGIS

MEDICAL HORIZONS TV Monday P. I

spasm, acidity and pain

tension and emotional strain

Supplied: Antrenyl-Phenobarbital Tablets (scored), each containing 5 mg. Antrenyl bromide and 15 mg. phenobarbital. ANTRENYL® bromide (oxyphenonium bromide CIBA)

IN LABILE HYPERTENSION . .



'Sandril' c 'Pyronil'

Relieves hypertension without inducing nasal congestion

'Sandril' offers sustained, gradual reduction of blood pressure as well as mental relaxation and alleviation of apprehension. The principal side-effect of therapy with all *Rauwolfia* preparations is nasal stuffiness. Clinical studies have shown that 'Pyronil' usually relieves this nasal congestion.

For your convenience, 'Sandril' and 'Pyronil' have been combined in one small tablet. Its content of 'Pyronil' will relieve nasal congestion in about 75 percent of your patients who experience this annoying side-effect. The additional cost is insignificant.

Each tablet combines:

Dose: Same as with 'Sandril' alone.





About 75% of these obtain gratifying relief when given 'Sandril' ë 'Pyronil.'

Also: 'Sandril,' tablets of 0.1 mg., 0.25 mg., and 1 mg.; elixir containing 0.25 mg. per teaspoonful (5 cc.).

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fluoroscopic studies, I believe that disease exists somewhere in the gastrointestinal tract. There are 2 places where lesions are sometimes missed—at the cardia of the stomach and in the cecum. The findings by the gastroscopist and roentgenologist make cancer of the cardia unlikely, but the roentgenologist is alone when seeking lesions in the cecum.

ATTENDING M.D: But shouldn't something be palpable with carcinoma of the cecum?

VISITING M.D: Yes. Many times a right lower quadrant mass will be the clue, but examination of the abdomen is difficult in this patient. I think barium enema should be repeated. Before the roentgenologist makes the study,

tell him that cancer of the cecum is suspected.

ATTENDING M.D: (Two days later)
The last colon study showed carcinoma of the cecum. Although the patient was not too well prepared before the first study, it was your tentative diagnosis that helped the roentgenologist locate the lesion. A resectable cancer of the cecum was found at surgery. I'm a little shaken by that initial negative colon report.

VISITING M.D. You shouldn't be. No medical diagnostic procedure is completely correct. When the laboratory or roentgen findings don't fit the symptoms, repeat studies and a special talk with whoever is doing the procedure for you are usually helpful.

Penalev.

provides flexible oral penicillin therapy

MAJOR ADVANTAGES: Easy-to-give. Tablets dissolve readily in water, milk, fruit juices, infant formulas.

Six dosage strengths of PENALEV give you true flexibility of dosage wherever oral penicillin is indicated. Side reactions are less frequent than with injections.

Supplied: Soluble Tablets of 50,000, 100,000, 200,000, 250,000, 500,000 or 1,000,000 units of potassium penicillin G.

Ideally suited to pediatrics, prescription compounding, aerosol therapy.



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NATA BEG KAPSEALS

vitamin-mineral combination

Prescribed early in pregnancy, NATABEC Kapseals help make certain that vitamin-mineral intake stays well ahead of increasing nutritional demands. Each NATABEC Kapseal provides iron and calcium, plus important vitamins, in a formulation expressly designed to supplement the diet of your

patients during pregnancy and throughout lactation.

DOSAGE: As a dietary supplement during pregnancy and lactation, one or more Kapseals daily.

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Mathiston, Miss.

Mail your caption to The Cartoon Editor Caption Contest No. 2

MODERN MEDICINE 84 South 10th St. Minneapolis 3, Minn.



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PEN·VEE · Oral*

Penicillin V, Crystalline (Phenoxymethyl Penicillin)

the totally new penicillin for decisive oral dependability

- Formulated specifically for oral use
- Acid-stable—virtually unaffected by gastric acid
- Alkaline-soluble—optimally absorbed in duodenum
- · Certain, high blood levels

*Trademark

Supplied: Tablets, 125 mg. (200,000 units), bottles of 36. Also available: Tablets BECHLIN*-Vez. 100 mg. (100,000 units) of benzathine penicillin G and 62.5 mg. (100,000 units) of penicillin V. bottles of 36.



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ILIDAR 'ROCHE'

increases
peripheral
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relieves vasospasm
by (1) direct
vasodilation, and
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Provides relief from aching,
numbness, tingling, and
blanching of the extremities.
Exceptionally well tolerated.

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IN CHRONIC

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RONIACOL 'ROCHE'

acts primarily
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Especially useful for long-term
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patients whose feet are
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ILIDAR - BRAND OF AZAPETINE

SONIACOL - SRAND OF BETA-PYRIDYL CARBINOL

Medical Crossword

Solution on page 276

HORIZONTAL

- 1. Corn on the foot
- 6. Surgical shock
- 12. The volatile oil 14. Occurrence
- 15. Lateral aspect
- 16. Dowel
- 18. Hence
- 19. Dactyl of the foot
- 20. Deadly
- 22. Division of geologic time
- 23. Negative prefix
- 25. Vexed
- 27. Symbol for titanium
- 28. Furrow open at one side
- 31. Homeopathic remedy
- 32. Three
- 34. Internal cusp of premolar tooth
- 37. Printer's measure
- 39. Greek letter
- 40. Immerses
- 41. Prefix meaning
- down

- 12 15 18 19 29 32 35 37 42 43 44 45 47 48 51 52 53 54
- 42. Blood relation
- 44. Contaminate
- 46. Genus of mice
- 47. Mental conception
- -vaccine; anthelmintic alkaloid
- 50. Passage
- 51. Derma
- 53. Pertaining to the body
- 54. Genus of aristolochiaceous plants
- 55. To twist

VERTICAL

- 1. Pertaining to tissue
- 2. Atebrin

- 3. An ore deposit 4. Suffix for quin-quevalent nitrogen
- 5. Chemical symbol of methyl
- 7. Chemical symbol of xenon
- 8. Contemporary English physician
- 9. Any one of the parts into which the zygote of a cell
- sometimes divides 10. Mold in which metal is cast
- 11. Lacking in normal strength
- 13. Sac containing
- the heart 16. Prefix meaning
- around 17. Festive
- 21. osis; phaco-
- cele
- 24. Number

- 26. Mends 28. Saturated
- (abbr.)
- 29. In the morning (Latin abbr.)
- 30. -detector
- 33. Bladder
- 35. Anthelmintic 36. Instrument for pounding drugs
- 38. A nest
- 41. European coin 43. Genus of the
- beet 45. Chemical sym-
- bol of silver
- 46. Myositis puru-lenta tropica 48. Odorless.
- colorless gas 50. Speck
- 52. Let him take (Latin abbr.)
- 53. Therefore

Do you enjoy the Medical Crossword?

The Editors are interested in your reaction to the Medical Crossword. If you would like to have the feature appear regularly, please write The Editors, Modern Medicine, 84 South Tenth Street, Minneapolis 3, Minn.

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(Hematinic Concentrate with Intrinsic Factor, Lilly)

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divided dosage assures better absorption and utilization of iron; averts gastric irritation.



(ETHINAMATE, LILLY)

a new nonbarbiturate sedative

of very short action

'Valmid' is indicated in simple insomnia caused by mental unrest, excitement, fear, worry, apprehension, or extreme fatigue. It is also of benefit when patients complain of early-morning awakening or when a barbiturate is contraindicated.

'Valmid' offers these important advantages:

- Prompt induction of sleep
- Very short action
- Bright awakening
- Wide margin of safety
- No addiction

Supplied as Tablets 'Valmid,' 0.5 Gm.

(7 1/2 grs.), in bot-

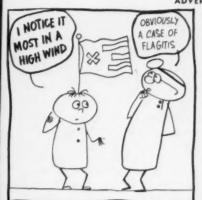
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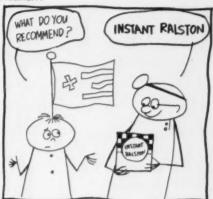
'Valmid' is taken by mouth about twenty minutes before retiring. Dosage ranges from 1 to 2 tablets; usually 1 tablet suffices.

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Fulfills all 3 therapeutic objectives

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In treating coughs and respiratory disorders three objectives are essential:
(1) Control of the cough impulse;
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FROM ABROAD

GERMANY

Therapy for Skin Tumors

Radioactive cobalt incorporated in a plastic mass is useful in treating superficial tumors of the skin, reports Dr. H.-J. Endres of the University of Heidelberg. The radioactive mass is easily molded and can be fitted to almost any surface. Because of the mold's small size and flat form, surrounding tissues are readily shielded from radiation damage.

Dermat. Wchnschr. (Leipzig) 131:145-151, 1955.

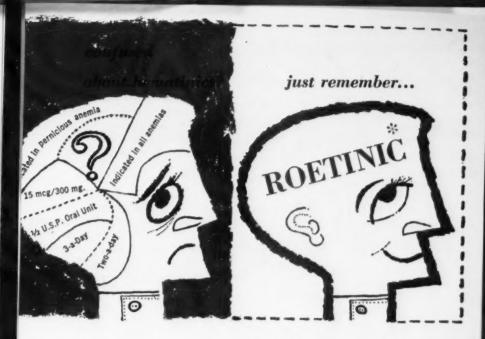
Differential Diagnosis

Osteomyelitis, septic arthritis, neoplastic changes, and soft-tissue inflammation may be misdiagnosed as rheumatoid arthritis, states Dr. G. Gaudilitz of the City Hospital, Berlin.

Diagnostic errors were made in 86 of 1,220 consecutive patients.



"A lonely little old heart, isn't it?"



one formula:

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Each ROETINIC capsule contains:

Intrinsic Factor-Vitamin B₁₂
Concentrate . . . 1 U.S.P. Oral Unit Folic Acid 2 mg. Ferrous Sulfate, Exsiccated 400 mg. Ascorbic Acid (C) 100 mg. Molybdenum Oxide (as the Trioxide) . 1.5 mg. Cobalt (as the Gluconate) . . 0.5 mg. Copper (as the Gluconate) . . 0.5 mg. Manganese (as the Gluconate) . . 0.5 mg. Zinc (as the Gluconate) . . 0.5 mg. Supplied: Bottles of 30 and 100 soft, soluble capsules. On your prescription only.

One capsule daily for all treatable anemias...

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The most potent hematinic your patient can need



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100 patients, suffering from sub-acute and chronic dermatoses, used TARCORTIN for an average of three weeks, 95% of the cases improved.

TARCORTIN:

5% coal far extract, 0.5% hydrocortisone in grease less, stainless base. AVAILABLE: ¼ ounce tubes

The greatest number were committed in cases presenting acute articular pain.

Tuberculosis, tumors of the joints, and referred pain were mistaken for chronic rheumatoid arthritis in 56 patients; most were in the older age group with articular disturbances of long duration.

Deutsche Gesundheitsw. (Berlin) 10:135-140, 1955.

Pernicious Anemia

Paroxysmal dysrhythmias, decreases in frequency, low-voltage delta rhythms, and spikes may appear in the electroencephalograms of patients with pernicious anemia, apparently as a result of alterations in the glucose and oxygen metabolism of the brain.

Dr. J. E. Krump of the University of Heidelberg compared the data on 40 pernicious anemia patients with those of 34 persons with other chronic anemias. Electroencephalographic tracings were abnormal much more frequently with

(Continued on page 251)



"We can't both look!"

maximum efficacy with minimum risk

Terfonyl

SQUIBB METH-DIA-MER SULFONAMIDES

mg. per 100 ml.

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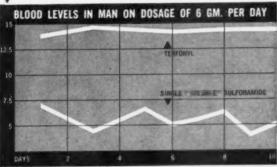
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- After Lehr , D., Modern Med. 23:111 (Jan. 15) 1955

Terfonyl is absorbed as well as single "soluble" sulfonamides, but is eliminated at a slower rate. For this reason, Terfonyl blood levels are much higher.

In experimental infections (Klebsiella, Pneumococcus, Streptococcus), Meth-Dia-Mer sulfonamides have been shown to be from three to four times more effective on a weight basis than single "soluble" sulfonamides.

Toxicity is minimal because normal dosage provides only one-third the normal amount of each sulfonamide. The body handles each component as though it were present alone, although the rapeutic effects are additive.

> Terfonyl Tablets, 0.5 Gm., bottles of 100 and 1000. Terfonyl Suspension, 0.5 Gm. per 5 ml., pint bottles.

0.167 Gm. each of sulfamethazine, sulfadiazine and sulfamerazine per tablet or per 5 ml. teaspoonful of suspension.

SQUIBB

*TERPONYL/ TIS A SQUIBB TRADEMARK

STECLIN



the better tolerated broad spectrum antibiotic

for effective therapy in many common infections

Steclin is an effective therapeutic agent for infections caused by most gram-positive and gram-negative bacteria as well as certain viruses, Rickettsiae, and protozoans. Steclin is better tolerated and produces higher blood and urinary levels than its analogues.

MYCOSTATIN



the first safe antibiotic active against fungi for effective prophylaxis against monilial superinfection

Mycostatin minimizes the danger of monilial overgrowth frequently associated with the administration of ordinary broad spectrum antibiotics. This overgrowth may sometimes cause gastrointestinal distress, anal pruritus, vaginitis, and thrush; on occasion, it may have serious and even fatal consequences.

Mystecline SQUIBB-TETRACYCLINE-NYSTATIN

the safest and broadest broad spectrum antibiotic preparation

Each Mysteclin capsule contains 250 mg. Steclin Hydrochloride and 250,000 units Mycostatin.

Minimum adult dose: 1 capsule q.i.d.

Supply: Bottles of 12 and 100

SQUIBB

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FUNGUS INFECTIONS COMPLICATING ANTIBIOTIC THERAPY

Excerpts and Abstracts
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SQUIBB



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Ointment

SQUIBB FLUDROCORTISONE ACETATE WITH SPECTROCIN (SQUIBB NEOMYCIN-GRAMICIDIN)

the anti-inflammatory, antipruritic action* of FLORINEF -much more potent than that of topical hydrocortisone



the prophylactic action* of SPECTROCIN-effective against many gram-positive and gram-negative organisms

*"... secondary infection with pustulation often follow scratching which is induced by the intense itching."
Nelson, W. E.: Textbook of Pediatrics, ed. 5, Philadelphia, W. B. Saunders Company, 1950, p. 1516.

Supply: Florinef-S Lotion, 0.05 and 0.1 per cent, in 15 ml. plastic squeeze bottles. Florinef-S Ointment, 0.1 per cent, in 5 gram and 20 gram collapsible tubes.

Also available: Florinef Lotion, 0.05, 0.1 and 0.2 per cent, in 15 ml. plastic squeeze bottles. Florinef Ointment, 0.1 and 0.2 per cent, in 5 gram and 20 gram collapsible tubes.

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- Ready-to-take-requires no reconstitution
- An aqueous suspension-contains no oil, eliminating completely any hazard of lipoid pneumonia
- Can be administered by dropper or teaspoon
- Pleasant, neutral flavor-if desired, can be mixed with vehicle of patient's choice (formula, orange juice, milk, cola, or similar liquid). It should then be taken promptly.
- Free-flowing-easy to pour and measure
- Will not form a heavy precipitate at bottom of bottle
- Stable for 18 months at room temperature
- Therapeutic blood levels within one hour

DOSAGE: Children, the usual daily dosage is 10 to 20 mg. per pound of body weight, in divided doses, depending upon the type and severity of the infection. For adults, the suggested minimum dose is 250 mg. q.i.d.; higher dosage may be required in severe infections or in patients who do not respond to smaller doses.

SUPPLY: 1 ounce bottles, supplied with dropper calibrated at 1 ml. Each 5 ml. teaspoonful contains the equivalent of 250 mg. tetracycline hydrochloride. Each 1 ml. dropperful contains the equivalent of 50 mg. tetracycline hydrochloride.

STECLIN' IS A SQUIBE TRADEMARE

SQUIBB A LEADER IN ANTIBIOTIC RESEARCH AND MANUFACTURE

for many common bacterial infectious diseases

Pentids

(Squibb 200,000 Units Penicillin G Potassium)

TABLETS

Recommended Dosage: 1 or 2 Pentids Tablets t.i.d. % hour before meals.

Supply: 200,000 units of buffered penicillin G potassium per tablet—in bottles of 12 and 100.

CAPSULES

NEW! FOR INFANTS AND CHILDREN Recommended Dosage: contents of 1 or 2 capsules in 2 cances fruit juice, milk, formula or similar vehicles t.i.d. % hour before meals.

Supply: 200,000 units of soluble, unbuffered unflavored penicillin G potassium per two-piece capsule—in bottles of 24 and 100.

PENTION'S IS A SQUISE TRACEMARK

SQUIBB

pernicious anemia, the highest incidence being in cases untreated or resistant to treatment.

Therapy with vitamin B₁₂ and intrinsic factor decreased the occurrence of irregularities.

Deutsches Arch. klin. Med. (Munich) 201:730-744, 1955.

Intraocular Tension

Rapid changes in atmospheric pressure may produce a considerable fluctuation in intraocular tension, reports Dr. P. Niesel of the University of Bonn.

Observations in healthy individuals reveal an increase in intraocular pressure as soon as the atmospheric pressure is decreased. This is attended by a simultaneous elevation of blood and retinal artery pres-

sures and cerebral blood flow. The rise in intraocular pressure is particularly notable if additional oxygen is not supplied when the atmospheric pressure is lowered.

The studies suggest that air flight at high altitudes is inadvisable for persons with glaucoma or other disease of the intraocular circulation.

von Graefes Arch. Ophth. (Berlin) 156:79-84, 1954.

Muscular Dystrophy

Inositol, choline, and tocopherol are often useful in the management of progressive muscular dystrophy in children, according to Drs. F. Menne and R. Beckmann of Wilhelm University, Münster.

Metabolic studies made before

to prevent and treat

BEDSORES

and provide added patient comfort

Ample clinical evidence indicates the value of Alternating Pressure Point Pads in the prevention and treatment of decubitus ulcers.

With the aid of APP pads it has been found possible to keep the skin healthy with one-half the nursing care usually needed.

Paralyzed, comatose and severely debilitated patients are candidates for the pads, as are patients to whom routine turning is painful, or those in continuous traction or casts.

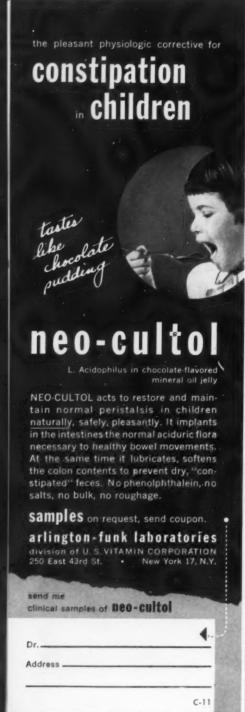
The Alternating Pressure Point Pad is a pneumatic pad placed over the mattress. It has parallel air cells. Alternate cells are inflated and deflated every four minutes by a quiet electric pump. Body pressure is thus distributed and allows normal blood circulation.

Available from your hospital supply dealer. Many of these dealers offer a rental-purchase plan on APP units. Or write to:

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ALTERNATING
PRESSURE POINT PADS
Manufactured by
AIR MASS, INC.
Cleveland 8, Ohio



and after treatment of 25 patients between 4 and 16 years of age revealed improvement in 14. No change was observed in 8 children; deterioration was noted in 3. The most significant metabolic findings were normalization of creatine levels and creatine-creatinine balance and elevation of the vitamin E content of the blood.

Klin. Wchnschr. (Munich) 33:556-562, 1955.

Acrodermatitis Atrophicans

Broad-spectrum antibiotics such as Aureomycin and Terramycin are often of value for acrodermatitis atrophicans, according to Dr. Erich Ludwig of the University of Hamburg. Benefit from these agents apparently substantiates the theory that the disease is caused by bacteria or spirochetes.

After treatment with the antibiotics, pathologic studies reveal decreased number of lymphoid cell infiltrations and fibroblasts. Tissue edema becomes less pronounced.

No untoward effects were observed in 11 patients thus treated. Dermat. Wchnschr. (Leipzig) 131:169-178, 1955.

Pyodermas in Newborn

Although resistant to treatment with sulfa drugs and common antibiotics, pyoderma in newborn infants is apparently relieved by Magnamycin, report Drs. J. Jochims and J. Wilckhaus of the City Hospital, Lübeck.

Antibiotic sensitivity tests should be performed before administering Magnamycin. Treatment is most effective against gram-positive microorganisms, especially staphylococci and enterococci.

The usual duration of treatment is ten to twelve days. To prevent



Geriatric Vitamin-Mineral-Protein Supplement Lederle

For the patient on a high-protein diet, GEVRAL PROTEIN is an excellent supplement. In addition to 60% protein, it supplies 26 vitamins and minerals in a dry powder that can be added to many beverages and foods. Here are some suggested recipes.

simple drinks Blend 1 heaping that GEVRAL PROTEIN with small amount of milk or orange juice; make smooth paste; stir in additional milk or juice to make 8 oz. For chocolate milk, prepare milk drink, then add 1-2 thsp. chocolate syrup. For hot cocoa, add 1 heaping that GEVRAL PROTEIN to instant cocoa powder in cup; add small amount of hot water, make smooth paste; stir in enough water to fill cup.

special drinks Vanilla Milk, 4 heaping tbsp. GEVRAL PROTEIN, 1 pint cool water, 1 cupful skim milk, 1 tbsp. sugar, ½ tsp. vanilla. Mix with rotary beater. Serve hot or cold. Makes 4 servings.

Chocolate Malted Milk. 1 heaping the GEVRAL PROTEIN, 1 the chocolate malt powder, 1 tsp. sugar, 1 glass whole milk. Mix with rotary beater. Makes 1 serving.

Egg Nog. 4 heaping thep. GEVRAL PROTEIN, 3 cups cool water, 1 thep. sugar, 2 well beaten eggs, ½ tsp. vanilla. Mix with rotary beater. Makes 4-5 servings.

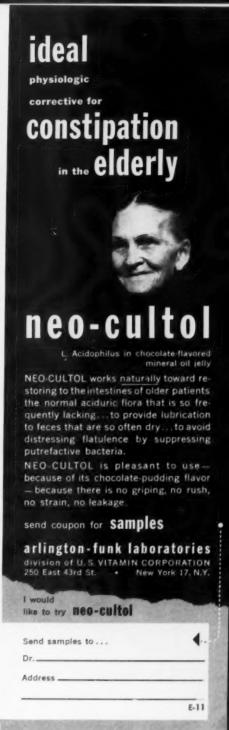
other foods Soups. Place 1 heaping the GEVRAL PROTEIN in saucepan. From % cup of water, take enough to make smooth paste. Stir in remaining water, then % can of cream of mushroom, chicken, asparagus, or celery soup.

Cereals. One heaping tbsp. GEVRAL PROTEIN can be mixed with ½ cup hot cereal during or after cooking. Add sugar, milk, or cream to taste.

LEDERLE LABORATORIES DIVISION

AMERICAN Cyanamid company Pearl River, New York Lederle

*BEG, U.S. PAT. 098,



FROM ABROAD

recurrence, however, therapy should be continued at least two or three days after clinical recovery has been observed.

Arch. Kinderh. (Stuttgart) 150:260-263, 1955.

BELGIUM

Cervical Carcinoma

The genitourinary tract is frequently involved with carcinoma of the cervix, report Drs. J. Foret, J. Closon, and A. Similon of the University of Liège.

Careful urologic examinations were made of 75 patients with cervical cancer; 43 had evidence of associated genitourinary involvement. Incontinence, dysuria, and hematuria were frequent. Cystitis was found in 11 patients, hydro-

nephrosis with unilateral or bilateral impairment of kidney function in 16. Of 15 patients without urologic signs, 12 had hydronephrosis and other renal disease.

Close urologic supervision is recommended for patients with cancer of the cervix, since early treatment of incipient hydronephrosis may prevent permanent loss of renal function.

J. urol., Paris (Paris) 60:551-559, 1954.

FRANCE

Congenital Hip Dislocation

When arthrographic examination is made before reduction of congenital hip dislocation in children, anatomic relationships can be evaluated exactly, report Drs. Pierre Bertrand of Paris and Henri Guias

deep, penetrating warmth in relief of pain...

ARTHRALGEN

ARTHRALGESIC UNGUENT

. . . effective, deep penetrating warmth relieves pain due to chronic arthritis, sprains, lumbago, muscular injuries and other conditions with localized circulatory deficiency.

Whittier

Whittier Laboratories, Chicago 11, Illinois

254 MODERN MEDICINE. November 15, 1955

1 ounce tubes and $\frac{1}{2}$ pound jars.

unexcelled among sulfa drugs...for safety

Few potent therapeutic agents have proved to be as relatively safe as the Triple Sulfas. Fractional dosage of each component sulfa greatly increases urinary solubility. In fact, no case of obstructive uropathy resulting from their use has been reported in the literature.

- For safety, for high potency, for wide-spectrum effectiveness, for economy-Triple Sulfas are outstanding! But remember: not all sulfas are Triple Sulfas. Leading pharmaceutical manufacturers offer them under their own brand names. Ask any medical representative about the Triple Sulfa products his company offers!
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- SULFAMERAZINE
- SULFAMETHAZINE

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AMERICAN Cyanamid COMPANY

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Suspension Neotrizine* contains equal amounts of each of the Triple Sulfas! This pleasant-tasting, pepsin-flavored liquid is readily accepted by children and adults. It provides the many proved advantages of the Triple Sulfas in combating a wide variety of infections. Packaged in bottles of one pint. Also available as Tablets NEOTRIZINE.

of Pont-l'Abbé. Postreduction examination determines the effectiveness of closed methods and reveals defects in the joint.

The decision whether to employ further conservative therapy or to resort to surgery is also facilitated by the procedure.

Rev. chir. orthop, (Paris) 41:56-72, 1955.

Ruptured Membranes

Occult rupture of the membranes can often be detected by examination of vaginal smears, reports Dr. Martial Dumont of the University of Lyons.

When premature rupture of the fetal membranes is suspected, vaginal smears are given special black staining and scrutinized for lipoid particles typical of amniotic fluid.

Usually, these lipoid droplets are intensely black, perfectly round, and easy to differentiate from fatty substances contained in sebum or soaps.

The test is reliable even with vaginal bleeding. Results are always negative in nonpregnant women. False-positive reactions occur in about 10% of cases.

Gynéc. et obst. (Paris) 54:227-231, 1955.

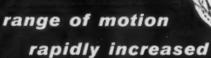
Combined Cholangiography

Visualization of the gallbladder and biliary tract can be improved by combined oral and intravenous cholangiography.

Drs. Guy Morin, André Busson, and Claude Blanchet of Paris use the following technic: About four-

(Continued on page 260)







in Rheumatoid Arthritis

Sterane

the most potent anti-arthritic

3 to 5 times more potent than hydrocortisone or cortisone

notably free of major hormonal side effects such as edema due to sodium and water retention, hypopotassemia, and hypertension

seldom requires low-sodium diets or potassium supplements in patients without cardiac complications when given in usual therapeutic dosage

supplied: in white, scored 5 mg tablets in the familiar Pfizer oval shape. Bottles of 20 and 100. preliminary findings, based on the measuring of pituitary ACTH suppression potency of various corticoids, appear to indicate that STERANE is 20% more potent than the cortisone analog, prednisone

1. Forsham, P. H., et al.: Paper presented at First Internat. Conf. on Prednisone and Prednisolone, New York, N. Y., May 31-June 1, 1955.

*brand of prednisolone

PEDIATRICS

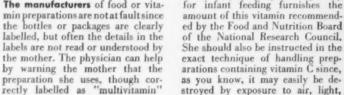
Prepared in The Inte Profession By The Pedlatrics Consultant Staff Of H. J. Heinz Company

BULLETIN

SCURVY

SCURVY traditionally has been a disease of neglect and filth, of ignorance and poverty. Scurvy seldom occurs in this couptry from these causes, but it does result from mistakes made by a conscientious but poorly instructed mother.

The manufacturers of food or vitalabels are not read or understood by the mother. The physician can help by warning the mother that the preparation she uses, though correctly labelled as "multivitamin"



or heat.

It is the greatest pity that in an age and country where the requirement for vitamin C is so widely known that scurvy should still appear in babies of intelligent, conscientious, and economically stable families.

may not contain vitamin C. The mother should also be made ac-

quainted with the fact that in the

great majority of instances, vitamin C can be obtained from orange juice.

As little as two and one-half ounces

a day of juice prepared especially

NOTE: These bulletins are designed to help disseminate modern pediatrics knowledge to the general medical profession and appear periodically in Modern Medicine.





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Baby Foods You Know It's Good Because It's Heinz

most potent

(2) in Bronchial Asthma for rapid increase

of vital capacity

3 to 5 times more potent than hydrocortisone or cortisone

notably free of major hormonal side effects such as edema due to sodium and water retention, hypopotassemia, and hypertension

seldom requires low-sodium diets or potassium supplements in patients without cardiac complications when given in usual therapeutic dosage

preliminary findings,1 based on the measuring of pituitary ACTH suppression potency of various corticoids, appear to indicate that STERANE is 20% more potent than the cortisone analog, prednisone



supplied: in white, scored 5 mg. tablets in the familiar Pfizer oval shape. Bottles of 20 and 100.

1. Forsham, P. H., et al.: Paper presented at First Internat. Conf. on Prednisone and Prednisolone, New York, N. Y., May 31-June 1, 1955.

*brand of prednisolone

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc. Brooklyn 6, New York

FROM ABROAD

teen hours before roentgenographic study, the patient is given one-half of the usual oral dose of radiopaque substance. At the examination, 20 cc. of contrast medium is injected intravenously, evacuation of the gallbladder is provoked, and films are taken every five minutes for one-half hour. Detailed study of all irregularities, especially dyskinesia and lithiasis, is thus permitted. Arch. mal. app. digest. (Paris) 44:334-340, 1955.

Treatment of Megaesophagus

The Heller operation for megaesophagus with cardiospasm gives good results in almost threefourths of patients, state Drs. P. Michaud and R. Latreille of the University of Lyons. For best results, the myotomy should be at least 10 cm. in length, with care to make a good circumferential dissection along the mucosal-muscular plane. This provides mechanical relief and also denervation, thus decreasing the possibility of further spasms.

The effect of the operation is greatest in younger patients with good esophageal contractility. Results are also directly related to the duration of the disease.

Of 156 patients, 145 have been observed eighteen months to thirteen years. Functional results were excellent in 108, satisfactory in 26, and unsatisfactory in 11. Death occurred in 6 patients.

Arch. mal. app. digest. (Paris) 44:306-314, 1955.





reduces swelling and inflammation in

Allergic and other Dermatoses

most potent Sterane anti-inflammatory Sterane

3 to 5 times more potent than hydrocortisone or cortisone

notably free of major hormonal side effects such as edema due to sodium and water retention, hypopotassemla, and hypertension

seldom requires low-sodium diets or potassium supplements in patients without cardiac complications when given in usual therapeutic dosage

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Supplied in bottles of 2 or 6 fluidounces.

Desage is I tempoonful two or three times daily; two or three times this amount for potassium therapy.

VALENTINE Company, Inc.

RICHMOND 9, VIRGINIA

Diagnosis of Hiatus Hernia

Banthine may be used to facilitate the roentgenographic diagnosis of diaphragmatic hiatus hernia, according to Dr. Charles Debray and associates of the University of Paris. The ganglion-blocking agent relaxes the gastric musculature and permits easier fluoroscopic detection of small hernias.

The drug is given by intramuscular injection shortly before examination. Decrease in motility and pronounced relaxation of the stomach are obvious within ten minutes. The effect of the agent persists more than one-half hour.

Arch. mal. app. digest. (Paris) 43:1202-1207, 1955.

Acute Abdominal Disease

Congenital malformations of the abdominal wall or viscera are usually responsible for acute abdominal conditions in newborn infants, states Dr. Michel Salmon of the University of Marseille.

Sudden vomiting is usually attended by abdominal distention and rigidity, respiratory embarrassment, and cyanosis. Bilious or fecaloid vomitus is strongly suggestive of an intestinal obstruction. Roentgenographic studies are required to de-

(Continued on page 266)

NOW! 12-HOUR PROTECTION FROM ANGINAL ATTACK

PENTRITOL TEMPULE*

This controlled disintegration capsule of 30 mg. PETN provides the vasodilatory action of nitroglycerine plus the striking advantages of 12-hour duration, absence of tolerance and minimal side effects.

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in varicose vein complications... striking relief

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ulcers begin to heal pain and burning disappear pruritus subsides edema, erythema and tenderness decrease Full information and bibliography on request

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(SHERMAN)

for quick, complete recovery reduced risk of relapse

Why not use Protamide first?

a sterile colloidal solution prepared from animal gastric mucosa . . . denatured to eliminate protein reaction . . . completely safe and virtually painless by intramuscular injection.

> *Smith, R. T.: New York Med. 8:16, 1952.

he's heard the call for .



Each 5-cc. teaspoonful of VI-DAYLIN contains:

Vitamin A., 3000 U.S.P. Units (0.9 mg.)
Vitamin D., 800 U.S.P. Units (20 mg.)
Thiamine (20 mg.)
Hibdfavin 1.2 mg.
Pyridosine Hydrechloride 0.5 mg.
Ascerbic Acid. 40 mg.
Vitamin Bts. 3 mg.
Hicothamide 10 mg.





VI-DAYLIN

(Homogenized Mixture of Vitamins A, D, B1, B2, B6, B12, C and Nicotinamide, Abbott)

Naturally. It's like golden honey, citrus fruit and lemon candy. And in every teaspoonful, he's getting a full day's supply of eight essential vitamins (including 3 mcg. of body-building B₁₂). There's no refrigeration, no pre-mixing with Vi-Daylin. Mom just pours it in the spoon—or serves it in milk, cereals or juices. At all pharmacies in 90-cc., 8-fluidounce and thrifty pint bottles.

and for infants ... VI-DAYLIN DROPS

She adds her fancy:

she looks for its delicate yet firm texture, cleanly scented clarity, and soothing, gentle lubrication,

to your prescription facts:

full coating, occludes as it covers vaginal walls; optimal spreading for maximum coital mixing; greatest spermicidal opportunity; blandly protective



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MANUFACTURED BY ESTA MEDICAL LABORATORIES, INC. CHICAGO 38, ILLINGIS tect the site of obstruction or perforation and diaphragmatic malformations.

Immediate medical treatment includes decompression, relief of spasm, and rehydration. Surgery is urgently needed for incarcerated inguinal hernia but may be done electively for unbroken omphalocele.

Gaz. hôp. (Paris) 127:395-400, 1955.

ARGENTINA

Gallbladder Visualization

Laparoscopic cholangiography can be performed with transvesical, transhepatic, or intraductal injection of contrast medium. The principal indication for the method is the impossibility of making a cholecystoangiographic examination by oral or intravenous routes.

Dr. M. Royer of the Hospital de Clínicas, Buenos Aires, advises transvesical puncture when the gall-bladder is easy to visualize; transhepatic when the gallbladder cannot be seen or is inaccessible; and transductal when manometry of the biliary tract is also contemplated.

The main hazard of the procedure is leakage of bile into the peritoneal cavity. This can be prevented by introducing a small drain through the same opening used for cholangiography.

Gastroenterologia (Basel) 83:110-124, 1955.



"Good Response"

in psoriasis

79%

of cases ireated with Entozyme alone

After using digestive enzyme replacement with ENTOZYME Robins' as the only therapy in a series of 24 psoriasis patients. "sealcitrant to all previous treatment," ingels" reports that "good response occurred in 19 asses [79%] within four weeks to three months...complete dearing in four cases."

Entozyme provides pencreatic enzymes
to help restore normal metabolism,
so commonly disordered in the psoriatic
..., and thus represents an effective
systemic approach to successful therapy.

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Each Entaryme
'tablet-within-a-tablet' contains:
-in its gastric-soluble outer
coating Pepsin, N.F. 250 mg.
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* Ingels, A. H.: Collfornia Medicine 79:437, 1953.

ENTOZYME



A. N. ROBDIS CO. DIC. - ECHMOND 25, VIRSINIA A Sthical Pharmacauticals of Morit sipsa 1875 Foods high in vitamins and minerals can provide your patient with good nutrition naturally. And these "diet do's" may tempt him to rely more on food than supplements for his vital nutrients.

These foods are best served raw-

Shredded new cabbage and carrot slaw combines the benefits of vitamins A and C with some calcium.

Dried apricots and figs prettily stuffed with cottage cheese and peanuts provide calcium, iron, vitamins A, B₂, niacin, and C.

Oysters, exceptionally rich in iron and calcium, carry vitamins A and D as well.

These good foods can be made even better—

Beef liver ranks high in iron, vitamins A, and B-complex. Brushed with tomato juice before cooking, it's tender and tasty.

Iron-rich oatmeal, served with molasses and milk, gets a plus in calcium and vitamin B₆.

Custard contains calcium and vitamins A, B_1 , and B_2 . A topping of orange juice concentrate adds a bonus in vitamin C.

Of course, other micronutrients are important, too. And a varied diet will help your patient get the vital body regulators he needs.





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Beer-America's Beverage of Moderation

An 8-oz. glass of beer contains 10 mg. calcium, 50 mg. phosphorus, I/8th minimum daily requirement of niacin, and smaller amounts of other B-complex vitamins.*

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*Average of American beers



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NEW A-P-CILLIN-200

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A-P-CILLIN-100

100,000 units
1 mg.
2½ gr.
2 gr.

2 tablets t.i.d.

In bottles of 50 and 500 tablets.

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Our Office Nurse

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent \$5. The Nov. 15 winner is

Sydney Choslovsky, M.D. Palmers Lake, N. D. Mail your caption to The Cartoon Editor Caption Contest No. 3

Modern Medicine 84 South 10th St. Minneapolis 3, Minn.



"Very well, I agree—she was a cute patient, but she had an acute appendicitis!"



HORLICKS

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The delicately flavored tablets dissolve slowly in the mouth (not to be chewed or swallowed). They are not noticeable and do not interfere with speech.

Nulacin tablets are supplied in tubes of 25 at all pharmacies. Physicians are invited to send for reprints and clinical sample.

*Steigmann, F., and Goldberg, E.: Ambulatory Continuous Drip Method in the Treatment of Peptic Ulcer, Am. J. Digest. Dis. 22:67 (Mar.) 1955.

†Mg trisilicate 3.5 gr.; Ca carbonate 2.0 gr.; Mg oxide 2.0 gr.; Mg carbonate 0.5 gr.

EXPASMUS

for relief of muscle spasm and pain in arthritic and rheumatic conditions

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for relief of tension associated with muscle spasm

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EXPASMUS'

combines two relaxants — mephenesin for skeletal muscle spasm and dibenzyl succinate for associated smooth muscle spasm — with the analgesic potency of salicylamide. Expasmus provides safe, effective therapy without the disadvantages of belladonna, the barbiturates or amphetamine.

Composition and dosage: Each tablet contains dibenzyl succinate, 125 mg.; mephenesin, 250 mg.; salicylamide 100 mg. In bottles of 100.

Average dose, two tablets every four hours; maximum daily dose 12 tablets.

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7(

short Reports

Antibiotics from Fungus

A Cephalosporium fungus produces several types of antibiotics which are nontoxic and may be of therapeutic value. The first, cephalosporin P, inhibits diphtheria and tetanus bacilli in vitro. Cephalosporin N, a penicillin (penicillin N) identical with synnematin B, may be useful for treatment of persons sensitive to penicillin G, since the cephalosporin does not provoke sensitivity reactions in these individuals. Sir Howard Walter Florey of Oxford, England, reports that

the third of these antibiotics, cephalosporin C, may be useful in treatment of staphylococcal enteritis and of local infections. Cephalosporin C, though possibly related to penicillin, has physical and chemical properties unlike those of other penicillins. Bactericidal effect of these antibiotics is weaker than that of most commonly used antibiotics. However, strains of bacteria resistant to other treatment may be inhibited by a cephalosporin derivative.

Ann. Int. Med. 43:480-490, 1955.

WARN YOUR PATIENTS ABOUT THIS!

 This is Walton's symbol for "Devil Dryness" which robs the vital moisture from delicate mucous membranes and the sinus.
 Stealing the moisture so necessary to protect little children as well as adults from many upper respiratory ailments!

Tell your patients about the dangers in dry air and suggest a Walton "Cold Steam"* Humidifler. The only double purpose humidifler—a vaporizer for the treatment of croup plus a general humidifler. Models available for either warm air or wet heat cost as little as \$14.99 a room.

Stop in today at your surgical supply house, appliance or heating dealer for a demonstration and ask for a free Dry Air Detector.

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BEFORE

Priscoline

AFTER

produces
maximal
vasodilatation
in
peripheral
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disorders

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PRISCOLINE IN ARTERIOSCLEROTIC ULCERATION

summary of a case1

Patient, age 75, developed arteriosclerotic ulceration with erysipeloid reaction and inflammation associated with marked swelling. Oral Priscoline was administered, 25 mg. 3 times daily, for 1 week—increased thereafter to 50 mg. 4 times daily. Steady improvement observed with complete healing in 8 weeks. No other medication used.

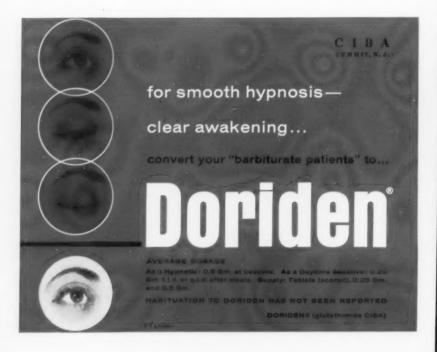
Tablets, 25 mg. (scored) Elixir, 25 mg. per 4 ml. Multiple-dose Vials, 10 ml., 25 mg. per ml.

Photographs and clinical data by courtery of R. I. Lowenberg, M. D., Consultant in Vascular Surgery, Connecticut State Hospital, Middletown, Connecticut.

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Compound
4 ounces
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Purified oxytocin from natural or synthetic sources stimulates and induces labor as effectively as does the posterior pituitary oxytocic preparation, Pitocin. Intravenous drip of vasopressin-free oxytocin induces uterine contractions indistinguishable in rate and degree from those stimulated by equal quantities and concentrations of Pitocin, report Dr. R. Gordon Douglas and associates of Cornell University-New York Hospital, New York City. The oxytocic effect is apparently inherent within the molecular structure of oxytocin rather than caused by the pressorantidiuretic action of the small quantities of vasopressin in Pitocin. Obst. & Gynec. 6:254-257, 1955.

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Bacteria in Portal Blood

Cultures of portal vein blood indicate that the liver is constantly seeded by bacteria from the gastrointestinal tract. Organisms were isolated from the portal vein blood obtained at laparotomy in 32% of 25 individuals, report Dr. William E. Schatten and associates of Western Reserve University, Cleveland. Gram-positive cocci are observed more frequently than other organisms. Bacteria in portal vein blood are not related to type of disease, operative manipulation, or bacteria in peripheral vein blood. Sterilization of the gastrointestinal tract is recommended in all instances of severe hepatic impairment or hepatic artery ligation.

Arch. Surg. 71:404-409, 1955.

you get... specific control of the hyperactive cough reflex—without undesirable opiate side effects

with new, non-narcotic, non-opiate

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Available as: TOCLASE EXPECTORANT COMPOUND (sugar free, cherry flavored, amber color) bottles of 1 pint; TOCLASE SYRUP (cherry flavored, red color) bottles of 1 pint; TOCLASE TABLETS 25 mg., bottles of 25.

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Diagnostic Virus Isolation

Isolation and identification of viruses may facilitate the early diagnosis of poliomyelitis and differentiate the disease from aseptic meningitis due to other agents. When throat or rectal swabs, blood or cerebrospinal fluid, or stool specimens are cultured in monkey kidney tissue and the positive tissueculture fluids obtained are mixed with specimens of hyperimmune monkey sera, the epithelial cells are completely destroyed in the tubes containing heterotypic serum, while no cytopathogenic reaction occurs in the tube with homotypic serum, report Drs. Mary O. Godenne and John T. Riordan of Yale University, New Haven, Conn. The procedure usually requires less than two weeks. The most reliable source of virus appears to be stool specimens. Results obtained by antibody studies are also useful in diagnosis. Complement-fixing antibodies usually indicate recent poliomyelitis infection; neutralizing antibodies may represent only a continuing reaction to past infection.

J.A.M.A. 158:707-712, 1955.

Solution to Crossword

H	2 E	1 L	40	5 M	A		e E	1 x	8 E	9 M	10	11 A
12,	R	0	N	E		13 _p		14 E	V	E	N	1
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sharp-uniform-safe

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- hold a sharp point
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SHORT REPORTS

Reduced Pancreatic Flow

Intravenous administration of the potent carbonic anhydrase inhibitor, Diamox, in dosages of 50 mg. or more per kilogram is capable of inhibiting and possibly completely blocking the total volume and total bicarbonate response of the pancreas to secretin in human beings. Dr. David A. Dreiling and associates of the Mount Sinai Hospital, New York City, report that the changes in pancreatic secretion were similar in healthy persons and in patients with pancreatitis. Amylase secretion is not greatly affected by Diamox, and sodium and potassium concentrations are not changed. The normal pancreatic cells secrete a solution of fixed bicarbonate concentration, and total

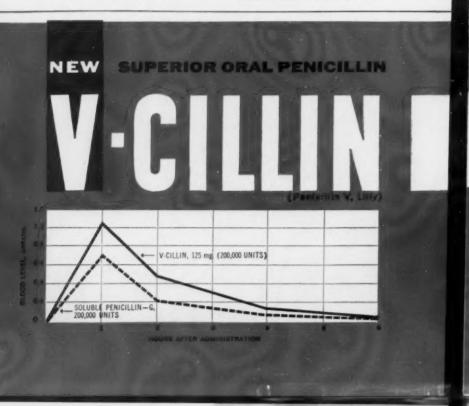
bicarbonate reduction is associated with total volume flow decrease rather than with secretion of a dilute juice.

Gastroenterology 29:262-278, 1955.

Lupus Erythematosus Therapy

Administration of Meticorten (prednisone) appears to suppress satisfactorily the active manifestations of systemic lupus erythematosus. Drs. Jack R. Dordick and Edward J. Gluck of Beth Israel Hospital, New York City, report that daily 5-to 10-mg. maintenance doses of Meticorten do not produce permanent or significant electrolyte and water disturbances.

Arch. Dermat. 72:276-278, 1955.





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PAMBROMAL°

COMBINATION THERAPY FOR A COMPLEX CONDITION



- reduces fluid retention
- elevites mood
- relaxes tension



Each Pambromal tablet contains:

Pamabrom (to neutralize the action of the antidipretic hormone) 50 mg.

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Bottles of 24 and 100 tablets.

Asrael, S. L.: Mississippi Doctor 31: 2, 1953.

Whittier Laboratories , Chicago 11, Illinois

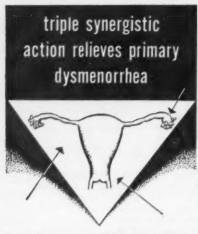
higher blood levels maintained longer

A totally different penicillin—not a modification of penicillin—G. Unlike all other penicillins, it has a unique chemical composition which assures stability in the presence of acid. Therefore, there is no loss of potency due to stomach acidity. 'V-Cillin' produces higher blood levels and a longer duration of high concentrations. It is repidly absorbed from the duodenum.

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Tri-Synar—through triple syner-gism—attacks smooth muscle spasm 3 ways... musculotropic, anticholinergic and antihistaminic. Powerful parasympathetic sedation is possible with only small doses of belladonna. Side effects are decidedly restricted.

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Each teaspoonful (5 cc.) contains: Fluidextract of Belladonna†..0.017 ml. Phenyltoloxamine

Dihydrogen Citrate.......20.0 mg. Ethaverine Hydrochloride.....12.5 mg. †Equivalent to 2.5 minims of tincture of belladonna U.S.P.

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Fluorescence of benzene solutions of tobacco smoke decreases to 40% of the initial level after one to ten days of exposure to various degrees of light and to 10% of the original level after three hours of radiation with a quartz lamp. The change indicates that 90% of the fluorescence is due to unstable components which may be related to highly reactive, radical-forming carcinogenic substances, report Drs. Hermann Druckrey and Dietrich Schmähl of the Sloan-Kettering Institute for Cancer Research, New York City. Since the decrease in fluorescence occurs under both oxygen and nitrogen atmospheres, oxidation is apparently not involved in the reaction.

Science 122:421, 1955.

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Protein Previews



New drink for peptic ulcer. The KNOX Gelatine drink made with instant dry milk is a palatable and nutritious antacid. It neutralizes and buffers gastric acidity. . . inhibits enzyme production and reduces motility. Directions for making the KNOX Gelatine drink in every package. Chas. B. Knox Gelatine Company, Inc., Johnstown, N. Y.

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- ... better visualization in cholecystography



Indications:

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Diseases of the biliary tract
Cholecystitis and cholelithiasis
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Prior to cholecystography

Average dose:

One 75 mg, tablet t.i.d. until the desired increase in bile secretion is attained. Maintenance dosage, 1 or 2 tablets daily

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SHORT REPORTS

Rapid Infusion of Blood

An improved recipient set which can be attached directly to the container in which blood was originally collected facilitates rapid transfusion and prevents fibrin clot stoppage of blood flow. A 17-gauge needle is used for venipuncture, permitting flow of large volumes of blood, explain Dr. Carl W. Walter and associates of Harvard University and Peter Bent Brigham Hospital, Boston. The set includes a coupler with a diameter of 4 mm. and a short channel to permit easy passage of fibrin; a filter, with at least 32 sq. cm. of filter surface no coarser than 70 by 70 mesh, in series with and adjacent to the coupler; and a leakproof, compressible filter chamber terminating in

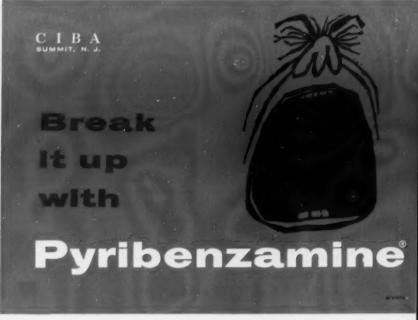
a drip nozzle. The components are assembled so that no leaks are demonstrable under a negative pressure of 125 cm. of water.

Surg., Gynec. & Obst. 101:115-118, 1955.

Tissue Culture Nutrition

Glucose, 7 vitamins, 13 amino acids, and mineral salts are specific nutrients essential for the growth and multiplication of strain L mouse fibroblast cells and of strain HeLa human carcinoma cells. Dr. Harry Eagle of the United States Public Health Services, Bethesda, Md., reports that a small amount of serum protein is also necessary to support growth of these mammalian cells.

Science 122:501-504, 1955.



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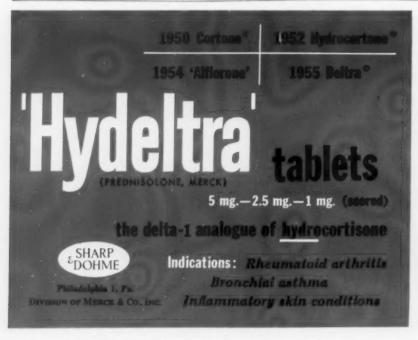
Contamination of catheters, face masks, and water-trap fluid of resuscitating equipment may be the source of widespread bacterial dissemination in delivery rooms. Drs. Abraham D. Rubenstein of Harvard University, Boston, and Richard N. Fowler of the United States Public Health Service, Washington. D. C., report that pure cultures of Salmonella montevideo and S. bareilly were isolated from the water trap fluid of resuscitators during two outbreaks of salmonellosis in newborn infants. Air exhausted from the apparatus apparently causes widespread contamination of the delivery room. Examination of resuscitators in several hospitals revealed frequent bacterial contamination of face masks; pathogenic organisms were also recovered from attached catheters.

Am. J. Pub. Health 45:1109-1114, 1955.

Potentiation of Sun Tanning

The ingestion of 8-methoxypsoralen may increase the tanning capacity of the skin. Rapid, dark sun tanning of normally pigmented areas occurred in 1 healthy person and 12 patients with vitiligo after receiving the drug as a protectant against overexposure, reports Dr. Aaron B. Lerner of the University of Oregon, Portland. The agent appears to potentiate ability to tan rather than allow longer exposure.

J. Invest. Dermat. 25:1, 1955.





Surely it is best to coagulate, desiccate or fulgurate the easiest way. That is what you would do using the National Electricator. It's compact, self-contained and without complications. For example, the instrument has but one handle with built-in button switch. This you can manipulate almost as you would a pen.

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Ointment for Angina

Application of Nitrol, a nitroglycerin ointment, appears to ameliorate angina pectoris in patients with cardiac insufficiency. Drs. James A. Davis and Bert H. Wiesel of the University of Alabama, Birmingham, report that of 17 patients, 9 showed a decrease in number of attacks and 4 experienced a feeling of well-being when ointment therapy was combined with the use of long-acting nitrites, sedatives, and sublingual nitroglycerin. The ointment may be applied to any skin area 5 to 8 in. in diameter, but application to the chest wall provides psychologic benefits. Apparently the nitroglycerin is slowly absorbed through the skin.

Am. J. M. Sc. 230:259-263, 1955.

Books Received

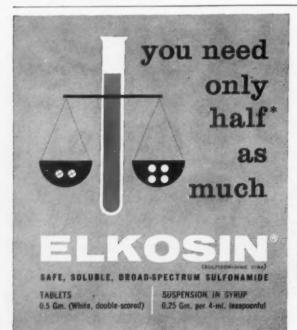
THE SHOULDER AND ENVIRONS by James E. Bateman, 565 pp., ill. C. V. Mosby Co., St. Louis, 1955. \$16.50

THE NATIONAL FORMULARY by Committee on National Formulary under supervision of the council and by authority of the American Pharmaceutical Association, 867 pp. Distributed by J. B. Lippincott Co., Philadelphia, 1955. \$9

TEXTBOOK OF OCCUPATIONAL THERAPY by Eamon N. M. O'Sullivan, 319 pp., ill. Philosophical Library, Inc., New York City, 1955. \$10

PRESENT-DAY PSYCHOLOGY edited by A. A. Roback, 995 pp., ill. Philosophical Library, Inc., New York City, 1955. \$12

understanding surgery by Robert E. Rothenberg, 620 pp., ill. Pocket Books, Inc., New York City, 1955. 50¢



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SUMMIT, N. J.

*Elkosin maintains effective blood levels, both in urinary and systemic infections, with standard (i.e., sulfadiazine) dosage, or approximately half the dosage required with the other widely used single-soluble sulfonamide. This means extra safety, and greater convenience and economy.

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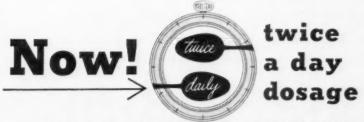
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Stephens, L. J., and Hendrickson, W. E.: To be published.

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BASIC SCIENCE

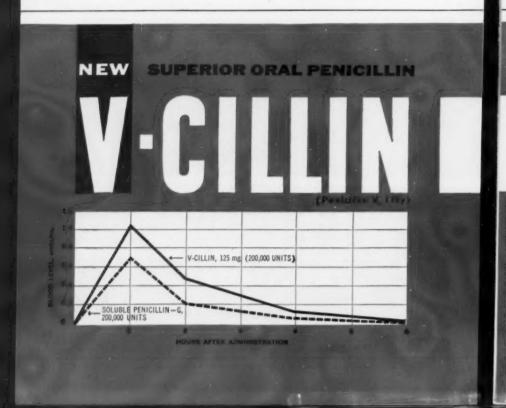
Briefs

Ocular Betatron Radiation

The betatron is especially useful in the study of ocular radiation changes because nearly uniform dosage may be obtained throughout the eye or the dose may be made lower in the anterior than in the posterior segment. Dr. Albert C. Biegel of the University of Illinois, Urbana, reports that portal size does not appear to influence the effect on rabbit eyes, nor does the type of beam used (roentgen-ray or electron). Ocular changes are gen-

erally similar to those produced by radiation of lower voltage. Two phases of inflammation—an early transient uveitis after doses of 1,650 r or more, and a delayed keratitis with anterior segment inflammatory change after doses of 2,700 r or more—may be observed. Slight change in the sentient layer of the peripheral retina occurs after high doses, but no changes in the sclera or optic nerve are apparent after doses up to 4,500 r.

Arch. Ophth. 54:392-406, 1955.



Side effects are "insignificant"

Duncan, G.G.: Am. College of Physicians, Sept. 1954.

Mio-Pressin* S.K.F.'s 3-way attack on HYPERTENSION

Rauwolfia, protoveratrine and Dibenzyline† in a carefully balanced combination that provides maximum antihypertensive effect with minimum side effects.



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A totally different penicillin—not a modification of penicillin—G. Unlike all other penicillins, it has a unique chemical composition which assures stability in the presence of acid. Therefore, there is no loss of potency due to stomach acidity. 'V-Cillin' produces higher blood levels and a longer duration of high concentrations. It is rapidly absorbed from the duodenum.

dosage: 125 or 250 mg. Li.d.

supplied: Attractive green-and-gray pulvules of 125 mg. (200,000 units), in bottles of 50.



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Doctors may differ on the question of allergy in infants due to citrus fruit juice.

Authoritative studies show that orange seed protein is definitely anaphylactogenic.... while orange peel oil possesses no anaphylactogenic properties...it does, however, possess primary toxic properties and may produce a nonallergenic gastric irritation.

BiB Orange Juice for babies can be prescribed with assurance that it is both hypoallergenic and non-toxic. Free from allergenic properties found in seed protein and from the nonallergenic irritant found in peel oil.



Stimulated Callus Formation

Bone nailing in rabbits appears to induce vascular proliferation of the periosteum which in turn stimulates deposits of periosteal bone. Drs. J. Trueta of the University of Oxford and A. X. Cavadias of the Nuffield Orthopaedic Centre, Oxford. England, find that medullary nailing of the radius in rabbits results in more rapid formation of larger callus than is observed with untreated fractures. Forcing the nail along the length of the marrow cavity destroys the nutrient artery of the diaphysis and induces compensatory stimulation of periosteal vascularization.

J. Bone & Joint Surg. 37-B:492-505, 1955.

Long-Acting Antihistamine

A single dose of the recently synthesized compound AH-2526 (1parachlorobenzhydryl-4-p-tertiarybutylbenzyl piperazine dihydrochloride) protects guinea pigs against the effects of histamine and prevents anaphylactic reactions for one to three weeks. Drs. S. Walter Landau and Leslie N. Gay of Johns Hopkins Hospital, Baltimore, report that 20 mg. per kilogram of the compound by intraperitoneal injection or 10 to 20 mg. by mouth suppresses major symptoms from histamine aerosol for a week or more. Injection of 20 mg. per kilogram also protects animals against death from intravenous histamine injection for two to three weeks, suppresses response of sensitized animals to aerosolized antigens for about two weeks, and reduces the likelihood of death from anaphylactic shock.

Bull, Johns Hopkins Hosp, 97:191-206, 1955.

VAGINAL TRICHOMONIASIS TRAVELS MR. FROM MRS.

The physician's time and skill in clearing up vaginal trichomoniasis are wasted when the husband re-infects the wife. Fortunately, there is a method of circumventing this endless cycle of re-infection.

Husband often the carrier. "Approximately 39 to 47 per cent of resistant cases are reinfections from the sexual partner." Others report high incidence. "."

Danger without signals. Trichomonads in the male rarely produce symptoms to signal their presence.⁶

Prevent re-infection. Karnaky recommends in recurrent cases that the husband wear a condom during coitus for four to nine months. By the end of this time the trichomonads will usually die out. Davis states: "Use of a sheath by the husband has long been advised during the period a woman is under treatment and should be used permanently if he carries the infection."

Prescribe quality condoms. To eliminate trichomonads "once and for all," take specific measures to win co-operation of the husband. In prescribing a condom, be selective as to quality and take advantage of Schmid product improvements.

When there is anxiety that the condom might dull sensation, the answer is to prescribe XXXX (FOUREX)® skins. Made from the cecum of the lamb, they feel like the patient's own skin, are pre-moistened and do



not retard sensory effect, If cost is a consideration, prescribe RAMSES,® a transparent, tissue-thin, yet strong condom of natural gum rubber. SHEIK,® also a natural gum rubber condom, is even more reasonable in price.

Isn't it true that any husband, any wife, in your practice would prefer to hand the druggist your prescription for a condom, rather than to ask for it "in public"? This is another instance of diplomacy in medicine to prevent an embarrassing situation. To assure finest quality and earn appreciation for your thoughtfulness, prescribe XXXX (FOUREX), RAMSES or SHEIK condoms by name. Prescribe Schmid protection for as long as four to nine months after the wife's infestation has cleared. The protection Schmid condoms afford is the very foundation of re-infection control.

References: 1. Karnaky, K. J.: Urol. & Cutan. Rev. 48:812 (Nov.) 1938. 2. Whittington, M. J.: J. Obst. & Gynaec. Brit. Emp. 59:614 (Aug.) 1951. 3. Freed, L. F.: South African M. J. (March 27) 1948, as abstracted in Urol. & Cutan. Rev. 52:489 (Aug.) 1948. 4. Bernstine, J. B., and Rakoff, A. E.: Vaginal Infections, Infestations, and Discharges, New York, The Blakiston Co., 1953. 5. Karnaky, K. J.: J.A.M.A. 155:876 (June 26) 1954. 6. Davis, C. H.: West. J. Surg. 63:53 (Feb.) 1955.

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A Keepsake

I visited the widow of a close friend and patient of mine to express my sympathy and ask if I could have something of his as a remembrance. The widow raised her tearful eyes and whispered softly, "Would I do?"—B.P.S.

Not Quite Everything

Before leaving the hospital with their first child, I advised a young couple to be sure to boil everything before putting it into the infant's mouth.

"Gosh, honey," the new father said, "no wonder you refused to nurse the baby."—C.V.M.



"Just watch the kind of progress you make, that's all!"

Facts on perineal hygiene for your women patients

Told in new booklet, written by a noted gynecologist, published by The B. F. Goodrich Company.

A SCIENTIFIC article on perineal hygiene is now being packed with every B. F. Goodrich gravity-flow syringe. The information in it is the type rarely published except in medical journals.

Purpose of distributing the booklet is to assist busy physicians in the dissemination of basic principles of perineal care. It's the belief of the author of the article that "because of the busy practices physicians have developed since World War II, not more than 1 of 1,000 women, visiting their physicians with a female complaint, ever learn these fundamentals."

The author, a specialist in obstetrics and gynecology on the staff of a leading American hospital, is nationally known to physicians as author of many articles printed in Modern Medicine.

Instructions are practical, easy to understand. Yet as the article warns, ". . . are not meant to replace a visit to your physician," but to give the general information you would want your patients to have before giving specific instructions.

Proper douching. At some time in almost every woman's life, it becomes necessary to douche, either from choice, or upon the advice of a physician. One part of the article tells how to douche and explains why, where to do it, what position to take, exactly how to operate a syringe, what solution to use when the physician has not advised a certain medication.

The type of syringe. "By preference," says the author, "the douche container should be a rubber bag of good quality and the 2-quart size. It should be equipped with an ample length of rubber tubing and, for shutting off the flow of water, there should be a metal clasp on the tubing several inches above the douche tip or nozzle."

All B. F. Goodrich gravity-flow syringes meet these specifications. They come in three styles: the wide, flat fountain syringe that hangs from a hook and is open at the top; the folding syringe that comes in a little waterproof case for carrying in a traveling bag, and the combination syringe, made of a hot-water bottle hanging upside down with syringe fixtures below.

A copy of this informative article on feminine hygiene is being mailed to you. After reading it, we feel sure you will approve of everything it says, subject, of course, to your specific advice in special cases.

All a woman has to do to get the booklet is ask at her drug store for a B. F. Goodrich gravity-flow syringe.

B. F. Goodrich

Gravity-Flow Syringes

PATIENTS I HAVE MET

Immune to Addiction

I told a patient who asked for another prescription for sleeping pills that he had to stop taking them or he would develop an unbreakable habit.

"Don't be silly, doctor," he replied.
"I've been taking sleeping pills every night for twenty years, and they aren't a habit yet."—C.M.

One-Sided Conversation

"Doctor, I want you to cure me of an irrepressible desire to make longdistance phone calls to myself," said the patient.

the patient.

"I imagine that that would be a very expensive indulgence," I mused.

"Not the way I do it," he replied.

"I always reverse the charges,"—E.K.

Accidentally on Purpose

I was examining a cowboy for an insurance policy report. "Ever have any accidents?" I inquired.
"Nope," he replied, "but once a

"Nope," he replied, "but once a steer broke 3 of my ribs and another time a rattlesnake bit me in the leg."

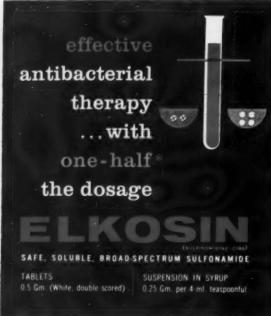
"Don't you call those accidents?" I asked.

"No sir. They did it on purpose."—P.C.

Teacher's Delight

I was giving a 7-year-old boy an eye examination. He had been unsuccessful in reading any of the letters that I had pointed out. I came to the last line in large type, which read E U O P G L, and asked him what he saw.

"I can't read that either, doctor," he said. "We haven't had that word in school yet."—L.L.B.



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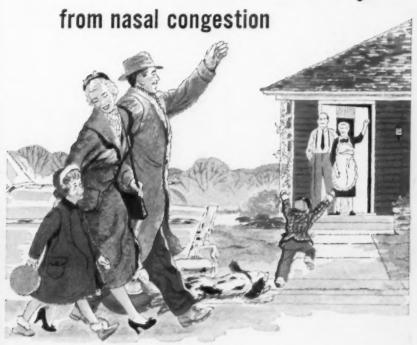
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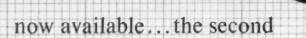
also available as TYZINE Nasal Solution, bottles of 1 ounce, 0.1%, and TYZINE Pediatric Nasal Drops, in 1/2-ounce bottles, 0.05%.

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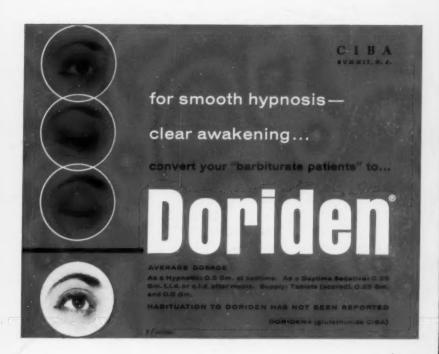
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